ANDREW HICKINBOTTOM

We delve into the world of British character artist, **Andrew Hickinbottom** and find out why he broke away from his daily 9-5 routine in favour of becoming a freelance artist...

EDITORIAL

Welcome to ISSUE 43 – and what an issue! We've gone absolutely ZBrush crazy this month and have not one, but *three* great tutorials using this software to create all manner of fantastic sculpts! The reason for the ZBrush craze is in fact because our gothic church interior tutorial series, for 3d Studio Max, Maya, Cinema 4D, LightWave and modo, dips into the creation of a gargoyle for the scene this month. Now, for those of you who don't own ZBrush then fear not, you can download your 30-day free trial version here: http://www.pixologic.com/zbrush/trial/download/. For this 2nd chapter of the gothic church interior series, our ZBrush artist, **Jesse Sandifer** gives us a detailed guide to sculpting a gargoyle statue for our scene (PAGE 47), which our Max, Maya, C4D, LW and modo artists will incorporate back into their scenes in the following instalment of the series, next month. As I've mentioned before, we wanted to give this series a twist, so we hope you'll like what we've done and that it will yield great results for your own scenes! Back to our other tutorials, we have two artists once again showing us how to speed sculpt a character – this time we've sculpting goblins (PAGE 57)! And, continuing on from where Rafael Ghencev left off last month in the ZBrush Character Creation series, we have **Joseph Harford** this month taking us through the sculpting and texturing work of a vampire (PAGE 67) – with some great accompanying movies for you to download and enjoy!

We're not completely mad though, we haven't forgotten about those of you who are not ZBrush users, and we bring you two great 'making of' articles that discuss the creation of a space scene in 3d Studio Max, by **Henry Lee** (PAGE 77), and a stunning female character made in Maya, by **Wang Shiyong** (PAGE 85). So there's plenty for everyone to enjoy!

Our interviews this month are also nothing less than quality: we have interviews with character modeller, **Andrew Hickinbottom** (PAGE 19), who I've been very pleased to get on board this issue; his interview pages are filled with the most fantastically inspiring stylised characters you could hope to see all in one place! We also have an interview with the highly respectable **Grzegorz Jonkajtys** (PAGE 7), who is best known for writing and directing his second film, *ARK*. Grzegorz has worked for films such as *Sin City*, *Hellboy*, and *Blade III* to name just a few, and by no doubt has a seriously impressive portfolio for us to feast on. I'm simply loving the diversity of this month's interviews and making of articles, and hope you'll feel the same and enjoy all that we have on offer to feed your creative minds!

Finally, don't forget to check out our Galleries (PAGE 37), as we feature brand new pieces from **Laurent Pierlot** and **Patrick Beaulieu**, plus many more stunning artworks for you to devour – so get those creative juices flowing! Be sure to take a good look at **Sven Juhlin**'s gallery image as we'll be bringing you plenty more where that came from in next month's interview! Well, enjoy our March offerings, have a creative month, and we'll see you again for more in April. Many thanks! ED.

CONTENTS

FREE STUFF!

Wherever you see this symbol, click it to download resources, extras and even movies!

FREE RESOURCES DOWNLOAD HERE

VIEW MOVIE DOWNLOAD HERE

ANDREW
HICKINBOTTOM

We delve into the world of British character artist Andrew Hickinbottom and we find out why he broke away from his daily 9 - 5 routine in favor of becoming a freelance artist.

Interviews
Grzegorz Jonkajtys & Andrew Hickinbottom

Articles
Animation as an Art Form

Galleries
Patrick Beaulieu, Jesse Sandifer & David Moratilla Amago plus more!

Tutorials
ZBrush Character Creation Series: Part 7: Vampire plus more!

Making Of's
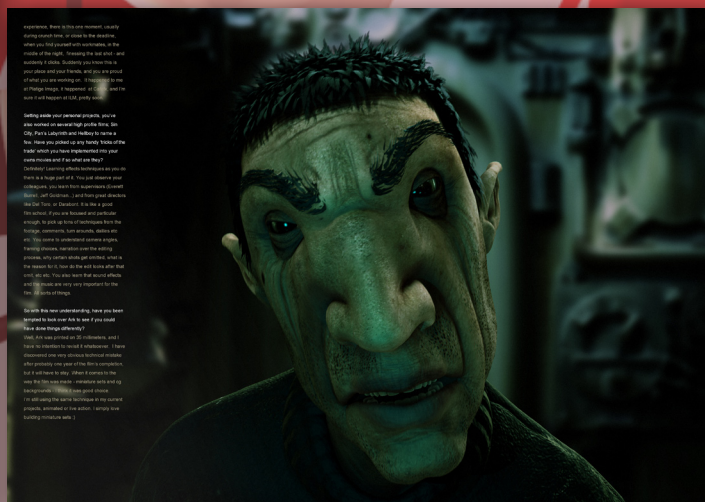Classical Girl by Wang Shiyong plus more!

Get the most out of your
Magazine!

If you're having problems viewing the double-page spreads that we feature in this magazine, follow this handy little guide on how to set up your PDF reader!


Setting up your PDF reader

For optimum viewing of the magazine, it is recommended that you have the latest Acrobat Reader installed. You can download it for free, here: **DOWNLOAD!**

To view the many double-page spreads featured in 2DArtist magazine, you can set the reader to display 'two-up', which will show double-page spreads as one large landscape image:

1. Open the magazine in Reader;
2. Go to the VIEW menu, then PAGE DISPLAY;
3. Select TWO-UP CONTINUOUS, making sure that SHOW COVER PAGE is also selected.
That's it!
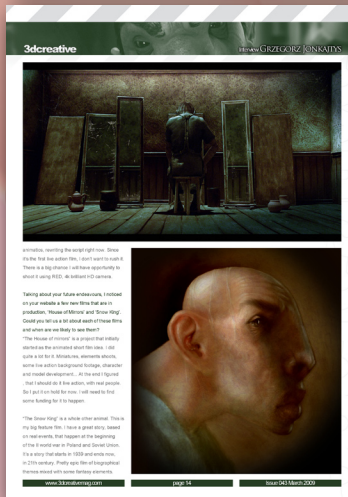
CONTRIBUTING ARTISTS

Every month, many artists around the world contribute to 3DCreative magazine. Here you can read all about them. If you would like to be a part of 3DCreative or 2DArtist magazines, please contact: lynette@3dtotal.com

Gothic Church
Interior Creation

As our regular tutorial artists take a well deserved break, regular 3DCreative artist, **Jesse Sandifer** this month tackles part 2 of our Gothic Church Interior tutorial series, in which see him sculpt the gargoyle from Richard Tilbury's concept sketch in ZBrush.

JESSE SANDIFER

A self-taught digital artist with 8 years experience. He co-owns Green Grass Studios in Dallas, Texas, which works on a variety of projects for films, games, television, commercials and in-game arena entertainment. Most of his spare time is spent participating in online challenges, doing personal artwork and dabbling with drawing and traditional sculpting.

http://www.jessesandifer.com
jessesandifer@gmail.com

ANDREW HICKINBOTTOM

Currently taking great influence from 2D artistry, pinup art and cartoons, Andrew is working as a freelance character modeller after working full-time at various small studios for over 10 years.

http://andyh.cgsociety.org

GRZEGORZ JONKAJTYS

Born in Poland and currently lives in San Francisco where he works for ILM. He graduated from the Academy of Fine Arts in Warsaw in '95 and has been working for the advertising, animation and feature film industries for over 12 years. He's contributed as a VFX artist and animation lead for such films as *Sin City* and *Hellboy,* amongst others, but is best known for writing and directing his second film, *ARK*.

http://www.3dluvr.com/jonkajtys

JOSEPH HARFORD

Has been an avid artist since childhood. After freelancing in advertising and film, he worked in the games industry at Crytek GMBH, the German games company behind *Far Cry* and *Crysis*. He later moved to Ubisoft as a senior character artist, and now works as a freelance artist while running ShineFX, a digital asset company, and overseeing CGChain.com.

http://www.josephharford.com
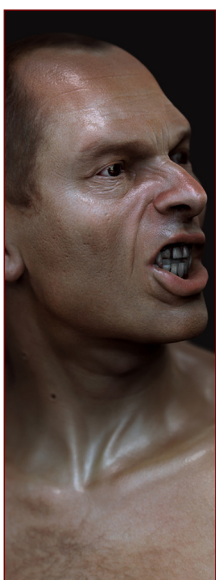
MAGDALENA DADELA

A character artist from Poland and a Vancouver Film School graduate. She is best known for realistic character sculpture and anatomy studies. At present, Magdalena is part of Ubisoft's Digital Arts studio in Montreal, Canada, where she has contributed to various cinematic projects on titles like *Assassin's Creed*, *Tom Clancy's End War* and *Far Cry 2*.

http://www.mdadela.com
magda.dadela@gmail.com

Henry Lee (Pashkov)

Lives and works in Russia. Henry studied mathematics in higher education and later gained a Masters in mathematical science. He's been fond of computer graphics since '98; it was a hobby for him until 4 years ago, when he was lucky enough to get a job in this area. He's currently a freelancer and has recently worked on some game and film projects as a concept artist and designer.

http://strannik.cgsociety.org

Wang Shiyong

A digital artist from China, working as an art director for one of the most powerful 3D animation companies in China: 2-10.cn. He mainly engages in the visual aspects of work, such as modelling, texturing, rendering, post-production, etc., and has participated in some large-scale projects.

http://www.wangshiyong.com
wangshiyong.com@gmail.com

Image by Grzegorz Jonkajtys

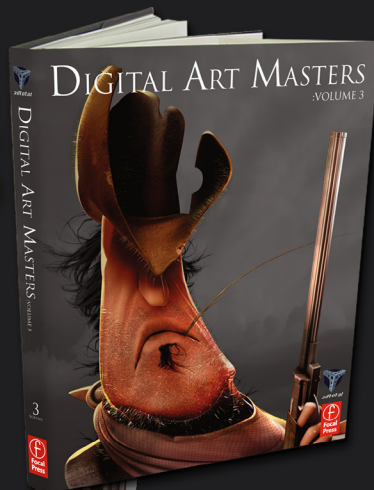## Would You Like to Contribute to 3DCreative or 2DArtist Magazine?

We are always looking for tutorial artists, gallery submissions, potential interviewees, 'making of' writers and more. To submit your interest, please send a link to your online portfolio or examples of your work to: **lynette@3dtotal.com**

GRZEGORZ
JONKAJTYS

If he's not working on the latest
VFX for ILM, he's busy working
on his own short animations.
We chat with the incredibly
busy Grzegorz Jonkajtys about
life at ILM and his latest live-
action film: *36 Stairs*.

GRZEGORZ JONKAJTYS

Hi Grzegorz, it's been a while since we last spoke (about seven months). At that time you'd just wrapped up working on your second short film *Ark* and were working as lead animator for CafeFX. So what's changed in that time?

Yes, *Ark* was a very long project - it took me over three years to complete. And in fact it was a side project really; I remember working on an animatic for *Ark* during the post production of *Sin City*. My regular job, as an effects artist, was taking at least 10 hours/per day, so I had a very limited time to work on my own film. By the time I finished *Ark*, I was working as a lead animator for Frank Darabont's *The Mist*. After that, came some other projects, like *Nim's Island*, *The Happening, The Mummy: Tomb of the Dragon Emperor* and *The Battle of Red Cliff* to name a few, where I did just a few effects shots here and there. In 2008 I created a short film *Legacy*, completely on my own, for a CGTALK international competition, and I won the "individual" award for it.

While working on *Legacy,* I moved from CafeFX to ILM. I had about 2- 3 weeks to move my entire life from Santa Maria, to San Francisco - it was pretty crazy! Since being at ILM, I have worked a tiny bit on *Transformers: Revenge of the Fallen*, some more on *Star Trek*, and now I'm working on *Terminator Salvation*.

Wow, it sounds like you didn't get much sleep or have much of social life during that period! So have you found switching cities and jobs any easier or are things pretty much the same?

My social life generally happens during weekends, or on Friday/Saturday evenings for me, and I think I manage to maintain healthy amount of it. I still meet friends, or go out to a concert, the cinema or a party with my girlfriend. Of course San Francisco offers millions more possibilities than Santa Maria, which was a nice but very small city. But then again, I had many more friends in Santa Maria, after having lived there for five years. Feeling comfortable at your new workplace takes time. Getting to know and befriend people happens doesn't just happen in a couple of
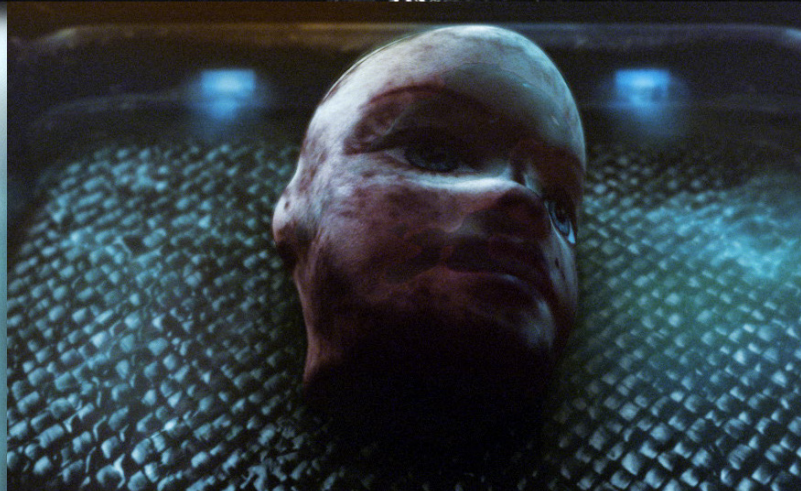
weeks. From my experience, there is this one moment - usually during crunch time, or close to the deadline - when you find yourself with workmates, in the middle of the night, finessing the last shot, and suddenly it clicks. Suddenly you know this is your place, that these people are your friends, and you are proud of what you are working on. It happened to me at Platige Image, it happened at CafeFX, and I'm sure it will happen pretty soon at ILM too.

Setting aside your personal projects, you've also worked on several high profile films: *Sin City*, *Pan's Labyrinth* and *Hellboy* to name a few. Have you picked up any handy "tricks of the trade" which you have implemented into your own movies and if so what are they?
Definitely! Learning effects techniques as you do them is a huge part of it. You just observe your colleagues, you learn from your supervisors (Everett Burrell, Jeff Goldman...) and from great directors like Del Toro, or Darabont. It is like a good film school; if you are focused and particular enough, to pick up tons of techniques from the footage, comments, turn arounds, dailies etc. You come to understand camera angles, framing choices, narration over the editing process, why certain shots get omitted, how do the edit looks after that omit, etc. You also learn that sound effects and the music are *very* important for the film. All sorts of things.

So with this new understanding, have you been tempted to look over *Ark* to see if you could have done things differently?
Well, *Ark* was printed on 35 millimetres, and I have no intention of revisiting it whatsoever. I discovered one very obvious technical mistake after about one year of the film's completion, but it will have to stay. When it comes to the way the film was made - miniature sets and CG backgrounds - I think it was good choice.
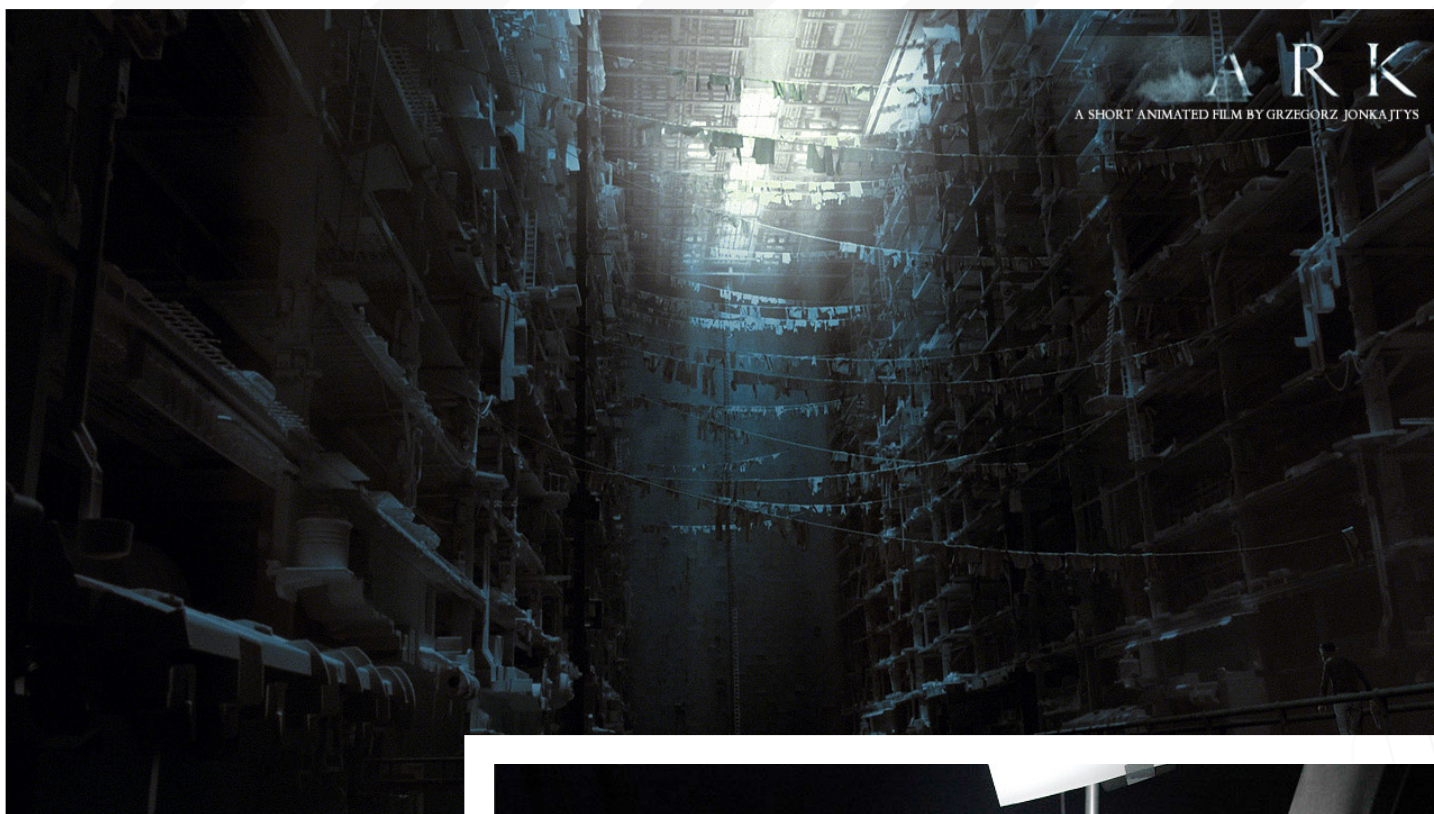
I'm still using the same technique in my current projects, animated or live-action. I simply love building miniature sets [Laughs]!
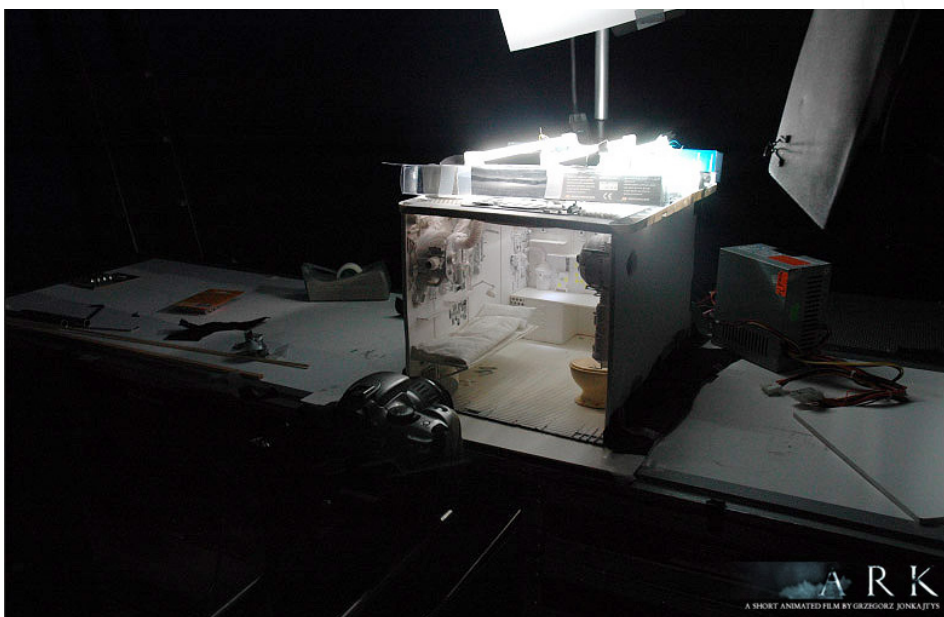
After winning so many awards for *Ark*, do you hope your future endeavours will amount to as much? Or do you think *Ark* was such a unique animation, it's going to be hard to top?

For me the power of *Ark* is in its story. Technically I'm pretty happy with it, but I know I can already do better than that. For the story


to cook - because that's how I work, I usually come up with the initial idea, and then refine it and refine it until it gets better - it takes time. Right now, I have a few ideas on my plate. One in particular that I plan to be filmed live-action in the next month or two. I don't think it will top the *Ark* in terms of epic scope, but it will be very engaging on a personal level. It's called *36 Stairs* at the moment, but I don't like to decide on definite titles until right at the very end, so it could end up being called something completely different!

Legacy - the alien story - took me three months to complete, from beginning to end. It's a much simpler, more intermediate project. The story didn't have the time to "mature", since the deadline was very, very short.

36 Stairs sound intriguing! Could we have a snippet of what it entails or is it all top secret?

36 Stairs is my first live-action film. It's set in the vague future, or maybe in a parallel universe. People are forced to use many bio-mechanical health "aids" to survive in it, because of the

JONKAJTYS 08 HOUSE OF MIRRORS
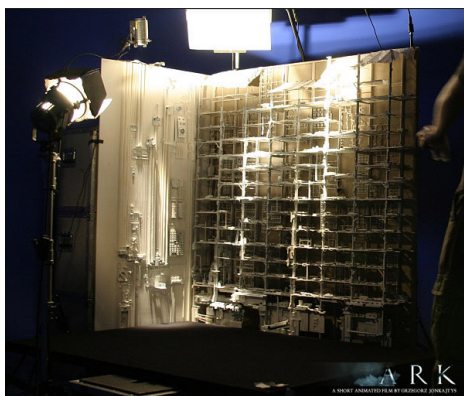
pollution etc. It's mostly, again, a personal drama, with just a couple of actors. It is still very much in development; I'm shooting previz, editing animatics and rewriting the script right now. Since it's my first live-action film, I don't want to rush it. And there's a chance I will have opportunity to shoot it using RED, a brilliant HD camera.

Talking about your future endeavours, on your website I noticed a few new films that are in production, *The House of Mirrors* and *Snow King*. Could you tell us a bit about each of these films and when are we likely to see them?
The House of Mirrors is a project that initially started as an animated short film idea. I did quite a lot for it: miniatures, elements shoots, some live-action background footage, character and model development... In the end I figured , that I should do it live-action, with real people. So I've put it on hold for now. I will need to find some funding for it to happen.

The Snow King is a whole other animal. This is my big, feature film. I have a great story, based on real events, that happen at the beginning of

the World War II in Poland and the Soviet Union. It's a pretty epic film, based on biographical themes mixed with some fantasy elements story, which starts in 1939 and ends now, in the 21st century. At the moment I'm in the process of designing characters, writing the script and finding people who would be interested in producing such a big project.

As your film ideas become bigger and bigger, is making, producing and directing films something that you would like to do as a full time career? Or do you just see these short films as more of a side line?

Directing, writing and producing my own films is definitely something I would love to do as full time career. Until I get someone to pay me to do that as a day job though, I will continue to make short films after hours, while learning and enjoying VFX, as much as I can.

When you're not doing your day job or working on your short animations, what kind of things do you enjoy doing to relax?

Well, most of the time when I'm not at work, I'll be working on my short films. Writing down ideas, creating concept designs for short films, editing animatics, trying new techniques, etc. When I don't work, or create my short films, I listen to audio books. You know, when I think about it, that's pretty bad [Laughs]! But yeah, that's what I do, I listen to audio books, while I'm

commuting to work, or at the gym. I haven't had a proper vacations for the last six years!

Well it has been a really pleasure talking with you again Greg, and I wish you all the best with your future endeavours. One last question before we wrap things up: if it wasn't for computers, what do you think you would have been doing at this stage in your life?

Pleasure to talk to you too. Well, I think I would still be involved in film making, even without computers. After all, when I first thought of a

special effects career, they were still practical effects, and that's what I wanted to do. So I guess I would be still here, applying alien makeup or blowing up miniature sets!

GRZEGORZ JONKAJTYS

For more work by this artist please visit:

http://www.3dluvr.com/jonkajtys

Or contact them at:

jonkajtys@gmail.com

Interviewed by: Chris Perrins

ANDREW HICKINBOTTOM

Andy has one of the most popular portfolios on the net, so what's the man like behind all of these cute girls? We find out his about creative priorities and techniques, what's it like when you quit your job in favour of your own schedule and (amongst other things) what's coming next.

"I BELIEVE THAT A BRILLIANTLY MADE MODEL IS NOTHING UNLESS IT IS PRESENTED WELL, AND SHOWN OFF EFFECTIVELY IN A MANNER APPROPRIATE TO THE CHARACTER'S INTENDED PERSONALITY"

ANDREW HICKINBOTTOM

I have been nosing through your portfolio and blog on CGSociety and it seems you decided to make a break from the 9-5 grind. Can you tell us where you were working before, what your current set-up is like and why you decided to make the change?

I was previously at a Birmingham (UK) based 3D animation studio called The Character Shop. I was working as the lead character modeller for various TV series, pitches, adverts and

© Andrew Hickinbottom

illustrations. Most of the work I did for them was for children's TV. I decided to leave after nearly four years, because I wanted to take a break from the 9-5 routine as I felt my creativity was waning a bit. I wanted to take time to re-inspire myself and re-discover my love for the job.

I'm currently freelancing. I occasionally get contacted by clients who've seen my work online, then I pick and choose from the jobs that interest me most. I kept in touch with my previous employer and sometimes get work from them too. Overall, it's a pretty good

© Andrew Hickinbottom

situation to be in as I get to do what I enjoy about 3D work most of the time, and I have more creative control.

Sounds great, can you tell us about some of the most interesting or enjoyable jobs you've picked up since being a freelancer?

Just before Christmas, I modelled five characters for a *Coca Cola* TV advert. It was really cool to work on, as it was probably the most high profile job I've ever had. More of that kind of thing please! I've also made low-poly characters for an online 3D chat room,

advertisements, packaging illustrations for two board games and I help out from time to time with my previous full-time employer when they need characters modelling for various TV series'.

I've been freelancing for less than a year, but considering I haven't been actively seeking ideal / desired clients (yet), I have had some interesting jobs thrown my way, just thanks to people seeing my work online.

Let's get the technical stuff out of the way: can you tell everyone about your preferred choice of software and creation techniques?
I prefer 3ds Max, mainly because I've been using it for so long. I have used Maya, XSI and Lightwave at other studios in the past, but I still prefer Max for its simplicity and familiarity.

I tend to hate getting bogged down in the technical aspects of software, so I usually stick to what I know best, which is predominantly good old fashioned subD poly modelling, biped for rigging, and the default MAX renderer - although I intend to learn Mental Ray at some point to improve my lighting.

I think it's really great that you still use a technique that's been around for years, and produce some of the most popular renders that can be seen today. Out of the entire character process from start to finish, which part do you think you enjoy the most?
Modelling. I enjoy the whole modelling process, from the initial blocking

out and designing, to the detailing and tidy-up. I like the challenge of trying to extrapolate the shapes from your head or from paper into 3D. I quite enjoy the very end of the process too - presentation, because then you get to see your model come to life. That part can be really satisfying.

There are so many awesome characters in your gallery; it's clear that you love the bright toon style, not to mention the cute chicks. I'm sensing a bit of a Tokyo influence coming in here, but can you tell us what it is that draws you to this particular style and these particular characters?

I've always wanted to be a cartoonist, even when I was a kid. My drawing skills have not had much use over the last 15 or so years, so to make up for my shortcomings, I try to incorporate the "essence" of 2D in my character designs. I really prefer 2D artwork to 3D these days. I can really appreciate the traditional talent and raw skill it takes to design and draw something from nothingness in a myriad of styles. It may also come from the fact that I believe the 3D market is over-saturated, especially with the numerous "talking animal" family movies being released. It's almost like 2D animation is a dying art.

As for predominantly modelling cute, pin-up girls? Well - they're easier on the eye and are more interesting to create than Orcs!

The latest character I can see in your gallery is "Trixie". Is this a sign that your work could be taking a turn to the Dark Side?

[Laughs]. Trixie was indeed my attempt to do something a little darker, as

people have sometimes said that I should try something less cheerful and bubbly. I wanted to make a character in a similar style to Shane Glines', my current favourite artist, and to do a modern style pin-up with stylised shiny PVC clothing.

I just checked out http://www.shaneglines.net/ and you're right - there are some really cool characters there! Have you heard of Martin Abel? My colleague interviewed him a while back for our 2D mag and his work is along the similar lines too.

I've not heard of Martin Abel, but his work looks really good. I've bookmarked it and will get round to saving the pics in my reference folder! It's important to keep a good library of pics for inspiration and reference. I'm constantly finding new artists to inspire me thanks to the various creative forums, portfolios and blogs I look at.

One of the things that makes your character gallery stand out from others is the amount of life you seem to have given them with the poses and facial expressions you've chosen. Can you tell us a bit more about this?

I believe that a brilliantly made model is nothing unless it is presented well, and shown off effectively in a manner appropriate to the

© Andrew Hickinbottom

© Andrew Hickinbottom

character's intended personality. A posed character is much more interesting than one in a "T" pose. I try to incorporate the liveliness, flexibility, appeal and impact of cartoon art whenever I present a character.

Do you have any key tips or advice for students who are looking to bring their characters to life?

I would recommend studying good 2D artwork / cartoons, as well as some of the leading 3D movies out there by Pixar etc. to see how good

posing "makes" a character and gives it the intended appeal. Just play around with your character until you find a pose you think suits it. When producing poses, I often have about four or five unused poses that I didn't think fitted. Composition and a clear silhouette are important things to consider too.

Have you ever had the urge to create a photoreal scene or character?

No, not really. I feel that today's modern

photoreal effects have more or less reached perfection when they're at their best. Reality can be boring. Being able to model a superbly detailed ZBrushed monster or render a muscular barbarian using fancy shaders requires lots of talent, but it just doesn't appeal to me stylistically. It is a great skill for getting into high-end 3D, such as the movie and FX industry, but it's not really my cup of tea.

Another thing that puts me off photorealism is that because the technology in rendering and modelling moves so fast, and the standard is set higher every year, it is a difficult artistry to excel at and stand out in.

Yes, that makes a lot of sense and you get to spend your time on your art and not learning new technologies. This said though, are there any software improvements you would like to see to make you job easier?

I'm pretty sure that every software improvement

© Andrew Hickinbottom
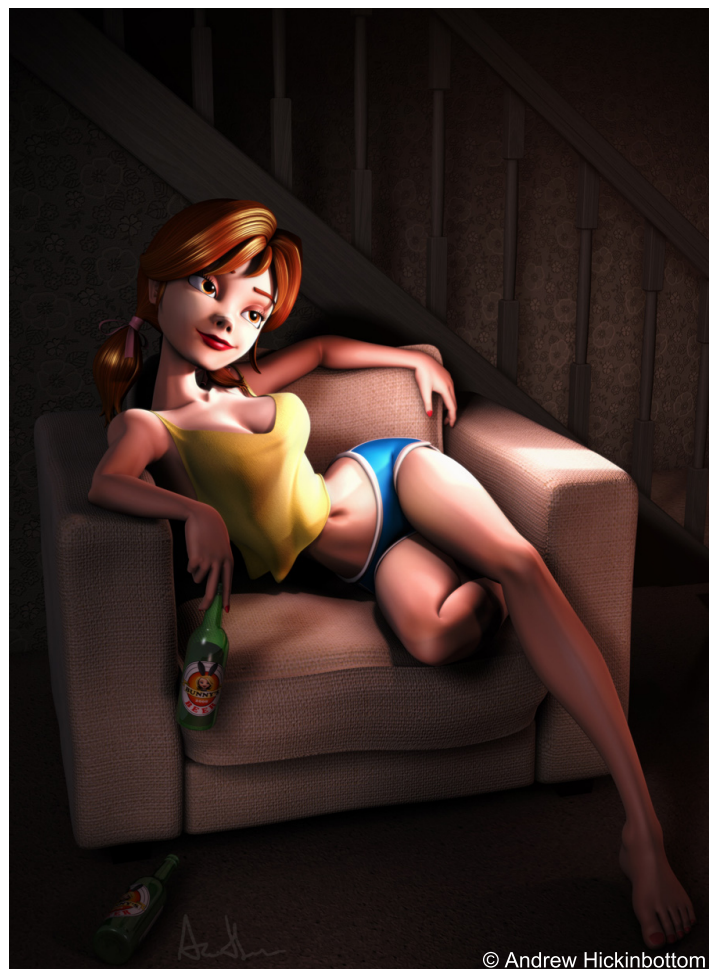
© Andrew Hickinbottom

I can think of already exists in the form of a plug-in, application, or simply through an advanced process in the programs I use. I just get on with the processes I am familiar with to speed things up. I find that fiddling with technical issues can impede creativity when you have an idea in your head that you need to realize while you are fully motivated and inspired.

What's on the horizon, Andy? You have so many fans waiting to see what's coming next - any chance of a sneak peak?

I have a few ideas for new characters and styles bouncing around my head, but little free time to do anything with them when I'm freelancing. I'm also quite keen on getting my 2D skills up to scratch, as I feel it will make me a better artist overall.

In terms of long term ambitions, I want to try out ZBrush and Mental Ray and see how I can incorporate their features into my style. I would also

like to learn animation and make my characters move, then try to do more work on my short film, which I will probably never get round to finishing!

Well whatever is it that you come up with, myself and thousands of others are looking forward to seeing it! It's been great chatting with you, hope to do the same again soon - Tom

ANDREW HICKINBOTTOM

For more work by this artist please visit::

http://andyh.cgsociety.org/gallery/

Or contact them at:

chunglist2@btinternet.com

Interviewed by: Tom Greenway

© Andrew Hickinbottom

© Andrew Hickinbottom

Luxology®

modo

modo is for artists

"ANIMATION CAN BE USED TO INSPIRE, EDUCATE, INFORM AND ENTERTAIN US, WHILE SHOWING US THE WORLD IN A WAY WE DIDN'T PERCEIVE IT BEFORE"

Animation
as an art form

Industry experts discuss the current trends and concepts in animation art.

Animation as an art form

Animators are artists as well as entertainers. They continually explore ways to use the medium to give us a new window into the world of our existence. Animation can be used to inspire, educate, inform and entertain us, while showing us the world in a way we didn't perceive it before.

In Animation Mentor's special report: *Behind the Animators*, (*link to report:* http://www.animationmentor.com/report) professional animators discussed how the art form is evolving into interesting new areas due in large part to the huge advances in technology that are allowing them to do new things.

This got us thinking about the art form and we decided to ask industry experts who have been following animation trends for years where they thought it was headed. Our panel of experts included Jill Smolin, Computer Animation Festival Director at SIGGRAPH 2008; Frank Gladstone, a 35-year animation veteran, consultant and educator; and Kathy Smith, USC professor, and chair of the Animation and Digital Arts school.

Jill Smolin reviewed hundreds of hours of animation from around the world during SIGGRAPH. "The one thing that struck me was that most of the submissions were very light and happy as opposed to dark and heavy as they have been in previous years," Smolin said.

What she saw as a consistent theme was that animators found a way to use animation to tell a powerful story in a way that live action could

not. When asked to elaborate, she cited the use of timing, exaggeration and symbolism in animation to create an environment that people recognise, but in no way could inhabit. For example, in *Octopodi*, which won Best of Show at SIGGRAPH, a chase scene in Greece becomes surreal when pink and orange octopi slingshot through. "By taking us into a new reality, animators can show us characters and situations in a new light and entertain us in ways that tickle the imagination," said Smolin. "We love Bugs Bunny and other classic animated characters because they are complete beings. They are flawed, fallible, egotistical, funny, smart, sly, silly and a whole host of other things that show us who we are."

Kathy Smith has been exploring the bounds of animation for years and sees animation as a

tool that can help us make sense of our place in the world. In a quest to illustrate the artistic process that reflects the way we perceive and store information, stories and ideas, Smith has created experimental animation that plays with the ideas of narrative structure and perception. "I believe the art form of animation developed as a way to reflect our own physical and mental evolutionary process… animation [is] a powerful medium for conveying complex ideas, dreams and emotion," said Smith. Her most recent work, *Slippages*, is on display now (*link Slippages to this url*: *http://www.kathymoods.org/slippages/ slippages.html*).

Frank Gladstone noticed that there was more animation being created than ever by more people because technology has gotten so

accessible, affordable, and easy to use. He calls it the democratisation of the art form. "It's exciting because we are seeing a lot of diversity in points of view, and we're seeing animation in more venues besides feature films and TV. There are games, of course, but also Webisodes, flash animations, art installations and independent creations of all kinds."

The downside of this democratisation, according to Gladstone, is that a lot of people are learning how to use the technology without mastering the artistic skills necessary for making good films. "If professionals don't begin by learning the basics such as the nuance of performance and cinematics, and don't have the artistic fundamentals required to make good artistic decisions, they will be unable to produce great results," he said. As an educator and consultant, he often works with schools and studios to help train new recruits in fundamental principles, as well as helping them understand that animation is an art form and, in order to get good at it, animators need to develop as artists. Another trend Smolin noticed at SIGGRAPH was that a lot of great animation was being created in Flash. "The work was unbelievably fantastic!" she said. "The storytelling was

amazing and ranged from funny, to evocatively beautiful and had improved tremendously from 2000. It's a huge difference. Now you have the ability to do some really cool stuff with Flash. In fact, much of what you see on Nickolodean and the Cartoon Network today is created in Flash."

Gladstone said he noticed a resurgence of old technologies such as stop frame and 2D animation. "It's an exciting time now as technology gets better, more intuitive, and there

is a developing convergence of 2D and 3D techniques as well."

All the arts – whether it's animation, literature, dance, painting or sculpture – are about telling a story or making a statement. "This is what gives a piece of art resonance and meaning," said Gladstone.

The animation art form has an interesting history. As we look back to early animations like *Steamboat Willie (link to youtube video: http://www.youtube.com/watch?v=AEEaT_UQnVM&feature=related)*, one of the first sound cartoons created 80 years ago, we can see that even then creative storytelling and engaging characters are what make this piece so special. As technology continues to evolve and give us new tools, animators will do well to remember that. As artists, they will be challenged to use these new tools to find new ways to tell us entertaining stories, and show us the world in a brand new light.
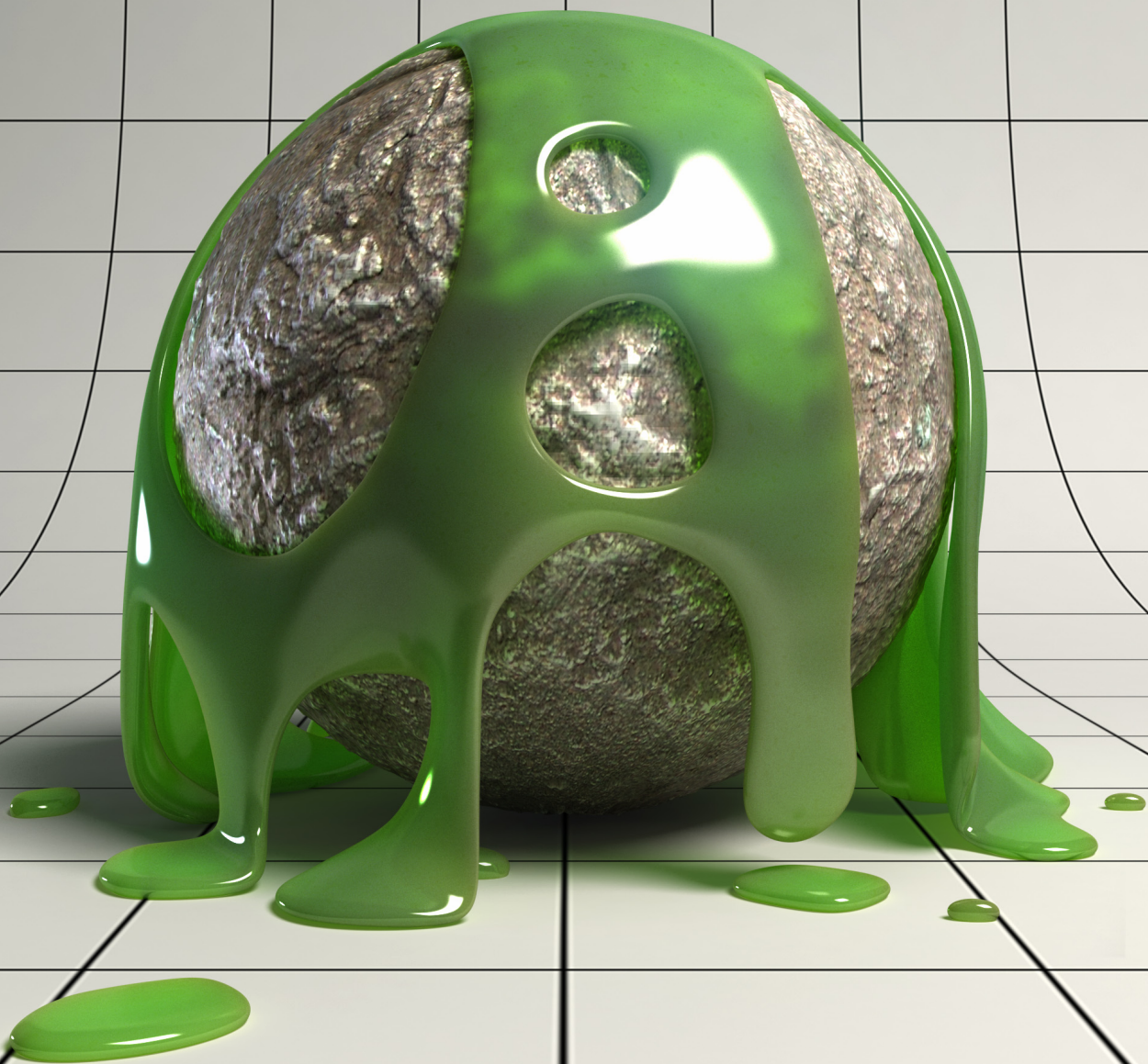
KRIS LARSON

For more information please visit:

http://www.animationmentor.com

Article courtesy:

AnimationMentor.com

THE SPHERE PROJECT

AN EVOLUTION OF TECHNICAL AND CREATIVE 3D SPHERE DESIGN

Evolving now at CGSphere.com

Vancouver Film School alumni credits include **Across the Universe** Geeta Basantani, Digital Compositor **Alias** Scott Dewis, Visual Effects Artist **Ant Bully** Ben Sanders, Character Animator | Rani Naamani, Animator | Ernesto Bottger, Character Animator **AVP: Alien Vs. Predator** Shawn Walsh, Color & Lighting Technical Director **Babel** Luis Blackaller, Storyboard Artist | Lon Molnar, Visual Effects Supervisor **Battlestar Galactica** Daniel Osaki, Lead Modeler | Megan Majewski, 3D Animator | Alec McClymont, 3D Artist **Blizzard Entertainment** Alvaro Buendia, Cinematic Artist **Bolt** Lino Di Salvo, Supervising Animator/Voice of Vinnie **Charlotte's Web** Aruna Inversin, Digital Compositor | Adam Yaniv, Character Animator | Tony Etienne, Lead Lighter Kristin Sedore, Lighter **Chicago** Lon Molnar, Animation Supervisor **The Chronicles of Narnia: The Lion, the Witch and the Wardrobe** Kristin Sedore, Lighter | Shawn Walsh, Lighter | Adam Yaniv, Character Animator **The Chronicles of Narnia: Prince Caspian** Andreas Hikel, Pre-Visualization Artist | Christoph Schinko, Character Animator | Jami Gigot, Senior Layout Artist **Cloverfield** Nicholas Markel, Pre-Visualization Supervisor **Constantine** Aruna Inversin, Digital Compositor **The Dark Knight** Pietro Ponti, Lead CG Lighting Artist **Dead Like Me** Daniel Osaki, Visual Effects Artist | Alec McClymont, 3D Artist **Diablo III** Alvaro Buendia, Cinematic Artist | Steven Chen, Cinematic Artist **Family Guy** Michael Loya, Storyboard Artist **Fantastic Four: Rise of the Silver Surfer** Arun Ram-Mohan, Lighting Technical Director | Shawn Walsh, Visual Effects Executive Producer | Jessica Alcorn, Compositor **Flags of our Fathers** Aruna Inversin, Digital Compositor **Gears of War (VG)** Scott Dossett, Animator **The Godfather (VG)** Kirk Chantraine, Motion Capture Specialist **The Golden Compass** Adam Yaniv, Animator | Chad Moffitt, Animator | Thom Roberts, Animator | Ben Sanders, Animator Andrew Lawson, Animator | Matthias Lowry, Visual Effects | Tony Etienne, Look Development Justin Hammond, Lighter Technical Director | Aruna Compositor | Fion Mok,

Your name here.

Pearl Hsu, Effects Inversin, Digital Matchmove Artist

Hairspray Lon Molnar, Visual Effects Production Executive **Halo 3** Bartek Kujbida, Character Animator **Happy Feet** Ben Sanders, Character Animator | Thom Roberts, Character Animator **Harry Potter and the Prisoner of Azkaban** Shawn Walsh, Color & Lighting Technical Director **Harry Potter and the Order of the Phoenix** Pietro Ponti, Technical Director **Harry Potter and the Half-Blood Prince** Harry Mukhopadhyay, Lead Effects Technical Director **Hellboy** Aruna Inversin, Digital Compositor **Hellboy II: The Golden Army** Christoph Ammann, 3D Sequence Supervisor **Horton Hears a Who** Arun Ram-Mohan, Lighting Technical Director | Brent Wong, Modeler **Hulk** Geoff Richardson, Visual Effects Editor **I, Robot** Daniel Osaki, CGI Modeler | Megan Majewski, Pre-Visualization **Ice Age: The Meltdown** Ben Sanders, Character Animator | Arun Ram-Mohan, Lighting Technical Director **The Incredible Hulk** Shawn Walsh, Visual Effects Executive Producer Tony Etienne, Look Development Lead **Indiana Jones and the Kingdom of the Crystal Skull** Henri Tan, Creature Technical Director **Iron Man** Adam Marisett, Visual Effects Artist **King Kong** Chad Moffitt, Senior Animator **King of the Hill** Michael Loya, Director **Kingdom Hospital** Daniel Osaki, Visual Effects Artist | Megan Majewski, 3D Animator | Alec McClymont, 3D Artist **Kingdom of Heaven** Shawn Walsh, Digital Compositor **Letters from Iwo Jima** Aruna Inversin, Digital Compositor **Live Free or Die Hard** Jessica Alcorn, Compositor **Lord of the Rings Trilogy** Chad Moffitt, Senior Animator **Lost** Scott Dewis, Visual Effects Artist **Lucasfilm Animation Singapore** Sandro Di Segni, Senior Effects Technical Director/Lead Digital Artist | Ming Chang, Lighting Technical Director | Adrian Ng Chee Wei, Character AnimatorSeema Gopalakrishnan, CG Software Developer **Mass Effect (VG)** Sung-Hun (Ryan) Lim, 3D Modeler **Matrix: Revolutions** Aruna Inversin, Digital Compositor | Shawn Walsh, Color & Lighting Technical Director **Master & Commander: The Far Side of the World** Robert Bourgeault, CG Artist **Metal Gear Solid 4 (VG)** Josh Herrig, Artist | Yuta Shimizu, Artist **The Mummy: Tomb of the Dragon Emperor** Aruna Inversin, Digital Compositor **Night at the Museum** Allen Holbrook, Animator | Adam Yaniv, Character Animator | Chad Moffitt, Animator | Kristin Sedore, Lighter **Persepolis** Marianne Lebel, Animator **Pirates of the Caribbean: At World's End** Ben Sanders, Character Animator Allen Holbrook, Animator | Aruna Inversin, Digital Compositor **The Pirates Who Don't Do Anything: A VeggieTales Movie** Mike Dharney, Animation Supervisor **Reign of Fire** Lino DiSalvo, Animator **Resident Evil: Extinction** Joshua Herrig, Visual Effects Artist **Robots** Arun Ram-Mohan, Additional Lighting **Rome** Teh-Wei Yeh, Matchmove Artist **The Santa Clause 2** Aruna Inversin, Digital Compositor Daniel Osaki, Visual Effects Artist **Scarface (VG)** Maya Zuckerman, Mocap 3D Generalist **Shrek the Third** Rani Naamani, Animator **Shrek the Third (VG)** Samuel Tung, Technical Artist **Sin City** Michael Cozens, Lead Animator **Smallville** Geeta Basantani, Lead Compositor **Speed Racer** Aruna Inversin, Digital Compositor **Star Wars Episode III: Revenge of the Sith** Andrew Doucette, Character Animator | Nicholas Markel, Pre-Visualization **Star Wars: Knights of the Old Republic (VG)** Arun Ram-Mohan, 3D Artist | Jessica Mih, Level Artist **Stargate SG-1** Aruna Inversin, Digital Compositing Artist | Daniel Osaki, Visual Effects Artist | Shawn Walsh, Digital Effects Supervisor **Stargate: Atlantis** Daniel Osaki, 3D Animator | Megan Majewski, 3D Animator | Alec McClymont, 3D Artist **Sweeney Todd: The Demon Barber of Fleet Street** Jami Gigot, Concept Artist **Transformers** Allen Holbrook, Animator | Henri Tan, Creature Technical Director

3D ANIMATION & VISUAL EFFECTS | CLASSICAL ANIMATION | DIGITAL CHARACTER ANIMATION
Vancouver Film School. Countless paths. **vfs.com/animationvfx**

Unreal Tournament III (VG) Scott Dossett, Artist **Valiant** Robert Bourgeault, Lighting Technical Director **Viva Pinata** Megan Majewski, Animator **WALL-E** Mark Shirra, Layout Artist **Watchmen** Jelmer Boskma, Previs Modeler | Lon Molnar, Visual Effects Supervisor | Cynthia Rodriguez del Castillo, Visual Effects Artist **World of Warcraft: Burning Crusade (VG)** Carman Cheung, Animator **A Wrinkle in Time** Aruna Inversin, Digital Compositor **and many more.**

THE GALLERY

This month we feature:

Daniel Radulescu

Ben Althoff

Jiri Adamec

Dzmitry Surynovich

Jesse Sandifer

Neil Maccormack

Laurent Pierlot

David Moratilla Amago

Sven Juhlin

Patrick Beaulieu - Squeezestudio

Modern Interior

Daniel Radulescu

happy_daniel_17@yahoo.com

Titanic on Vacation

Ben Althoff

benbmore3d@gmail.com

Backplate from: http://photoeverywhere.co.uk/

Hammerhead

Sven Juhlin

http://www.daybreakcg.com/

sven@daybreakcg.com

Check back in with us next month as
3DCreative will feature an interview
with Sven Juhlin!

POKER MASTER

David Moratilla Amago
http://dmoratilla.cgsociety.org/gallery/
dmoratilla@gmail.com

Portrait of Jen

Jesse Sandifer

http://www.jessesandifer.com

jessesandifer@gmail.com

Sandifer
2/09

FREAK

Laurent Pierlot

http://sato.cgsociety.org/gallery/

MORASS

Dzmitry Surynovich

s_d_@tut.by

© Surynovich Dzmitry

Mr. Squouch

Patrick Beaulieu - Squeezestudio

http://www.squeezestudio.com

squeezestudio@hotmail.com
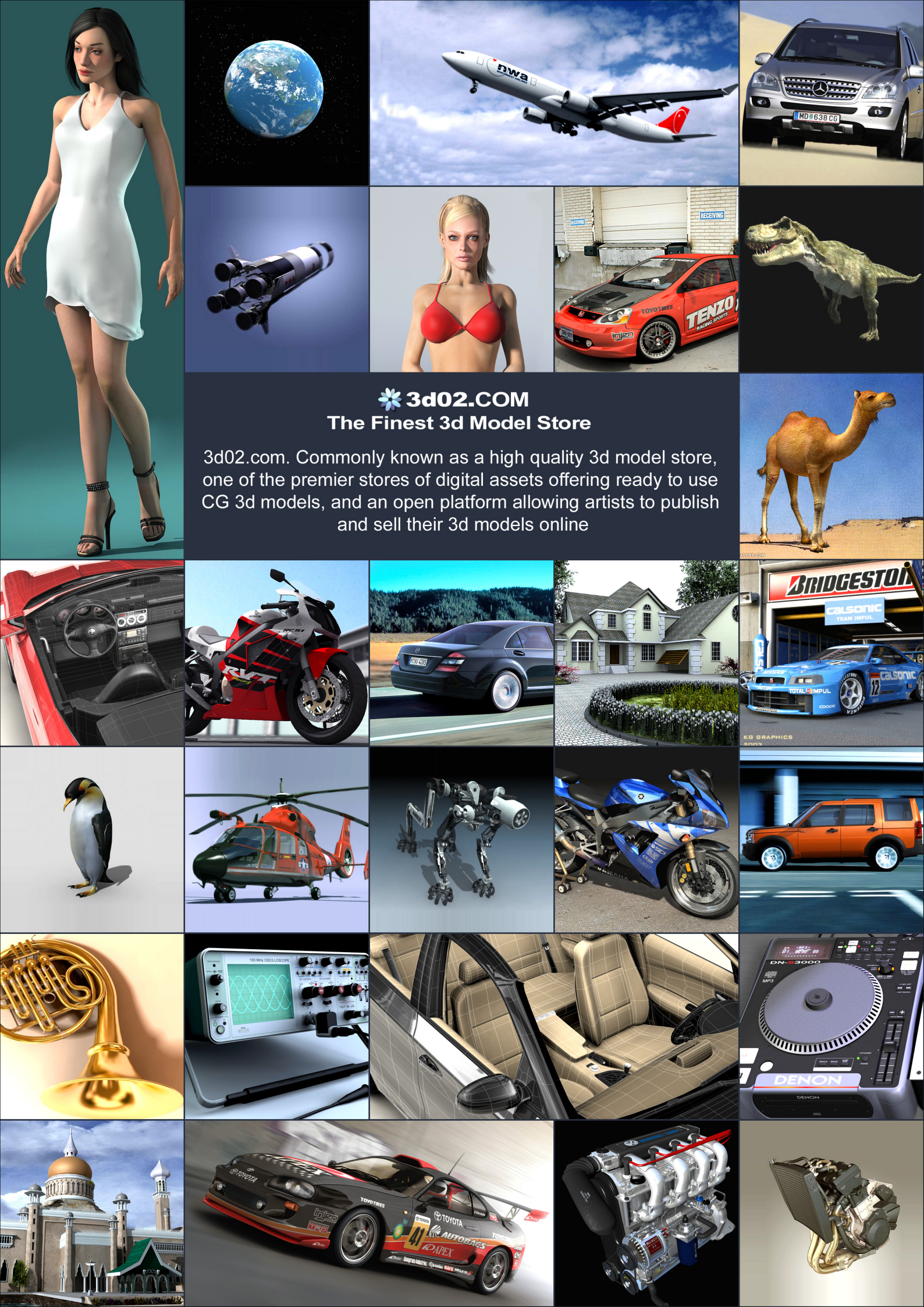
✻ 3d02.COM
The Finest 3d Model Store

3d02.com. Commonly known as a high quality 3d model store, one of the premier stores of digital assets offering ready to use CG 3d models, and an open platform allowing artists to publish and sell their 3d models online

Gothic Church

Interior Creation

This series will provide an overview of the principal techniques used to create a gothic interior based upon a concept painting along with a tutorial on the process of sculpting a gargoyle character in ZBrush. Key methods covering modelling, texturing, lighting and rendering will be outlined over the course of the series and culminate in a chapter on post production and how to composite numerous render passes into a final image.

The schedule is as follows:

PART 1: This tutorial will outline some of the prominent approaches to building the church interior. We will cover some of the key methods and modifiers responsible for creating the scene and core geometry.

PART 2: Will focus on the creation of the gargoyle which will be mounted on one of the columns. This tutorial will orientate around Zbrush and its powerful sculpting tools and show how a detailed model can evolve from simple ZSpheres.

PART 3: This part will detail the texturing phase of the series and deal with mapping and unwrapping key areas of geometry alongside the gargoyle.

PART 4: Lighting and rendering will be the focus in this tutorial. Light rigs and a variety of render passes will be explained in readiness for part 5; the post production.

PART 5: This the final part of the series will show how the various render passes are composited in Photoshop to create a final render. An account of some of Photoshop's tools will show how versatile this approach can be and show the value of multiple passes for post production.

Gothic Church
INTERIOR CREATION
PART 2: SCULPTING A GARGOYLE IN ZBRUSH

CREATED IN:

ZBrush

INTRODUCTION

For my portion of this multi-artist effort, I was called upon to produce a tutorial that explained how to create a high quality gargoyle that would grace the side of one of the columns in the architectural scene. When I first looked at the concept art provided by Richard Tilbury, I was instantly excited because of the style and emotion he wanted to convey with the sculpture and overall scene. I recognised right away that this was going to be a big anatomy exercise and it was going to further my knowledge of musculature and inherent forms. The legs and feet especially would prove to take a bit more research and caution because of the pose. I really wanted to keep this sculpture entirely in ZBrush so I could keep it free-flowing and to hone my own production pipeline.

To make things easier, I decided to separate the project into several phases. Let's get started!

ZSPHERES

Free movie 01 – download here

Using ZSpheres allows us to quickly mock up the form of the whole body and to give every part of the sculpture some topology to work

torso   legs and feet   upper torso   arms and hands

head and neck   ears   horn and final zsphere additions   adaptive skin result

Fig.01

with and not have to worry about creating it in 3ds Max. So start by selecting "ZSphere" in the Tools rollout, turn on X-axis symmetry, and start drawing the ZSphere on the canvas. Then simply click and drag on more ZSpheres to add more topology and extrude appendages. By using move, rotate, and scale, we can move these new ZSpheres around and flush out the design very quickly. To add more, go back to the draw mode. To check the skin that's being created, hit the "A" key and get a quick preview of where the sculpt is going.

So after quickly laying in the basic joints (don't forget about those clavicles!), add some extra ZSphere joints in between to give it enough

topology so that it subdivides more cleanly. I tried adding some eyes and a mouth at this point, but I wasn't satisfied with the results so let's just carve that in later on instead, and maybe do some retopologization too.

Once you're happy with the ZSphere layout, click on "Make Adaptive Skin" and it will crank out another ZTool in the Tools rollout (**Fig.01**).
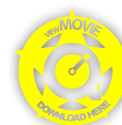
ROUGH BLOCKING

Free movie 02 – download here

With the new ZTool, subdivide it a few times and then go back down to the lowest level of subdivision and start the rough blocking phase.
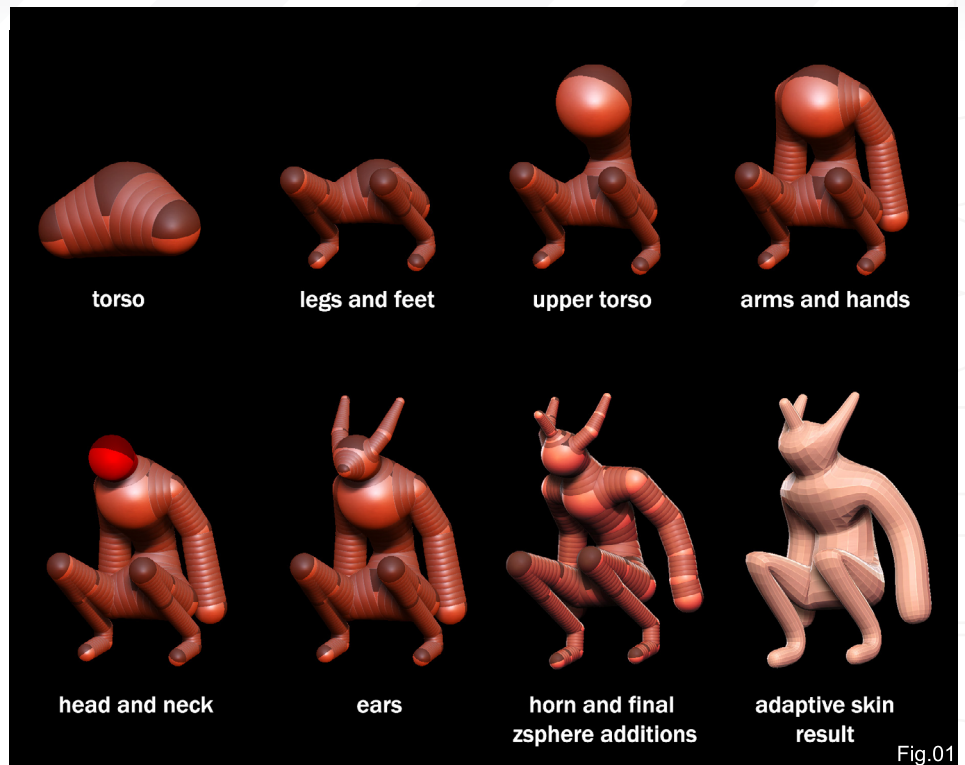

Fig.02

In this phase, the design, form, and silhouette are the only priorities. Using mainly the Move and Clay brushes, push and pull the major lines and flow of the sculpt as you further define the model to match the art. To make the work flow more easily, clean up the polygroups on the model so you can isolate the main parts of the model. This way you can get under those arms, or focus only on the face for a moment. It's also great for creating quick masks of a certain part of the body.

So as you block out the forms, keep adjusting the lines of action so the pose fits right and feels weighted correctly. The pose is rather unique so it might take some fudging to get it right. It's important to spend plenty of time on this part of the project because if it's wrong then we end up having to try and fix it later, when we're just trying to detail things out.

Once all of the major areas of his body have good enough blocking, it's time to move onto the next phase (**Fig.02**).

PRIMARY BLOCKING

Free movie 03 – download here

In this session, work an iteration up and start laying in more structural elements, like facial bone structure and head forms. Start laying in the large muscles with the clay brush and cut in other features with the Dam standard brush

Fig.03

Fig.04

(created by Damien Canderle). Remember to spend a good amount of time rotating the model and checking the draft of the forms to make sure nothing feels "flat" (**Fig.03**)

UPPER BODY BLOCKING

Free movie 04 – download here

Continue to lay in more primary forms for the upper body muscles. I would suggest exaggerating the transitions and lines of the muscle at first and then toning them down later on in the process. Give the hands some attention as well and start to block in the individual fingers and thumbs, and cut in palm muscles and tendons. Hands can be quite difficult so we will spend a good amount of time refining then later on in the project.

Extrude the arms, chest, shoulders, back, and abs using the Clay and Inflate brushes. It's
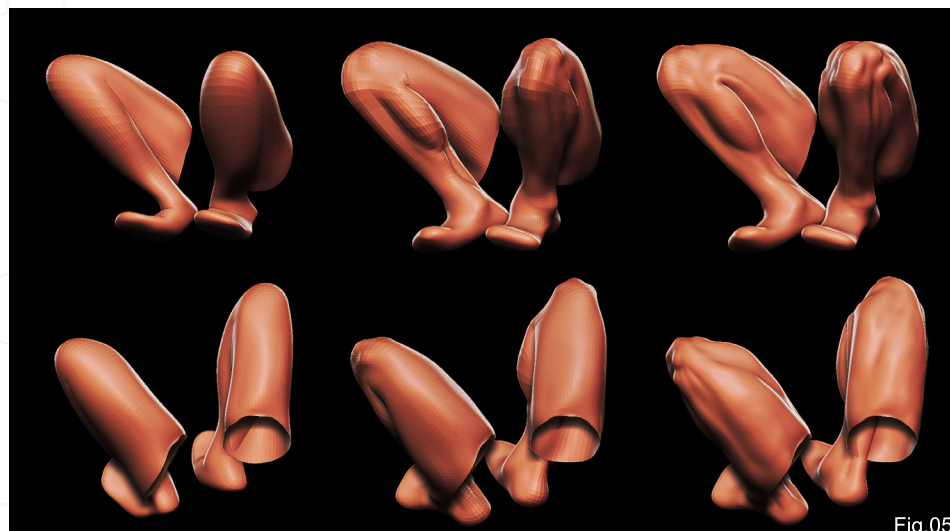
Fig.05

always a good idea to have a couple of anatomy books open at this point, so you can use them as references. Decent images of bodybuilders can also help you to understand how some of these muscles flex without too much "fat" in the way. They're also great for vein placement which we'll cover later on too (**Fig.04**).

LOWER BODY BLOCKING

Free movie 05 – download here

Now hammer out the flow in the legs and feet so that all the compressed muscle and mass works well together. Next start to identify where the bony marks (called condyles) of the knee are located and start to attach the muscles and tendons in a more defined way to those bones. Separate out where the quads on the top part of the thighs go and indicate their relation with some cuts with the Dam standard brush. Then clean all of that up with some Clay brush strokes and smoothing. Even though you can't see the hamstring area, it's still important to give it a bit of work so that the part that bulges outward relates properly to the calf muscles (**Fig.05**).

HEAD REFINING

Free movie 06 – download here

This is usually my favourite part of any project: defining the facial characteristics of the subject. It really gives your character it's identity, as well as the emotion that's to be conveyed. This gargoyle happens to look a bit solemn and

Fig.06

watchful to me, so that's what I am going for in this part of the process. So let's start by nudging the eye sockets, nose, mouth, and ears around until we're happy with their location. Use the Dam standard brush to cut out the lips, nose, ears, and cheeks. The eyeballs are bulged out with the Magnify brush. Then go over the top and bottom parts of the bulge with the Claytubes or Clay brushes to layer the eyelids on.

At this point, try to give everything on the face and head a once-over and then go back and continue layering on more detail as you go along. This way you don't get too attached to any one feature or spend too much time detailing something that may change later.

Give the ears some folds in the surrounding skin and add some muscles and striations in the jaw-line to give him a strong and powerful look. Use the Dam standard brush to add ribbed inflations to the ears. Add eyebrow hairs with the HairBrush_Two brush (created by Fatmir Gjevukaj) and continue adding small details along the forehead and temple areas (**Fig.06**).
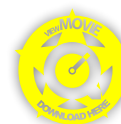
UPPER BODY REFINING:

Free movie 07 – download here

At this point in the sculpt, start to add more cuts in the skin to indicate muscle flow. Using primarily Clay and Dam standard brushes, go

Fig.07

Fig.08

along the neck muscles and trapezius to pop them out a bit more. Then cut some striations into the clavicles and chest. Refine the abs and clean up the obliques and serratus muscles. Add some armpit folds and tension to where his arms are clinched.

To give a better skin look and break up the muscle lines, it's a good idea to use Claytubes that go perpendicular to those lines and "connect" the muscles with a few strokes. It gives a subtle hint of stretched skin going over the muscles. It's also time to focus on the arms a bit more by breaking out all the major muscles and connecting them with some more

skin overlaps. Of course, remember to keep checking your anatomy references to see where insertions and overlaps take place (**Fig.07 - Fig.09**).

LOWER BODY REFINING:

Free movie 08 – download here

The same practice that we've just applied to the upper body, also applies to the lower body. Keep referring to your references here so that everything looks more or less believable. Since everything is compressed and tense in different places, add more skin folds where appropriate.

Further define the gargoyle's bony knee marks and check the flow of the tendons and muscles connected to them. Do some additional muscle cutting and add more skin overlaps. The femur should have a bit of a curve to it, so check that both that and the tibia bone have this characteristic swoop. Finally, separate the feet via polygroups so that we can work on them separately.

FEET REFINING:

Free movie 09 – download here

Since we haven't given a whole lot of attention to the feet so far, we need to start by refining
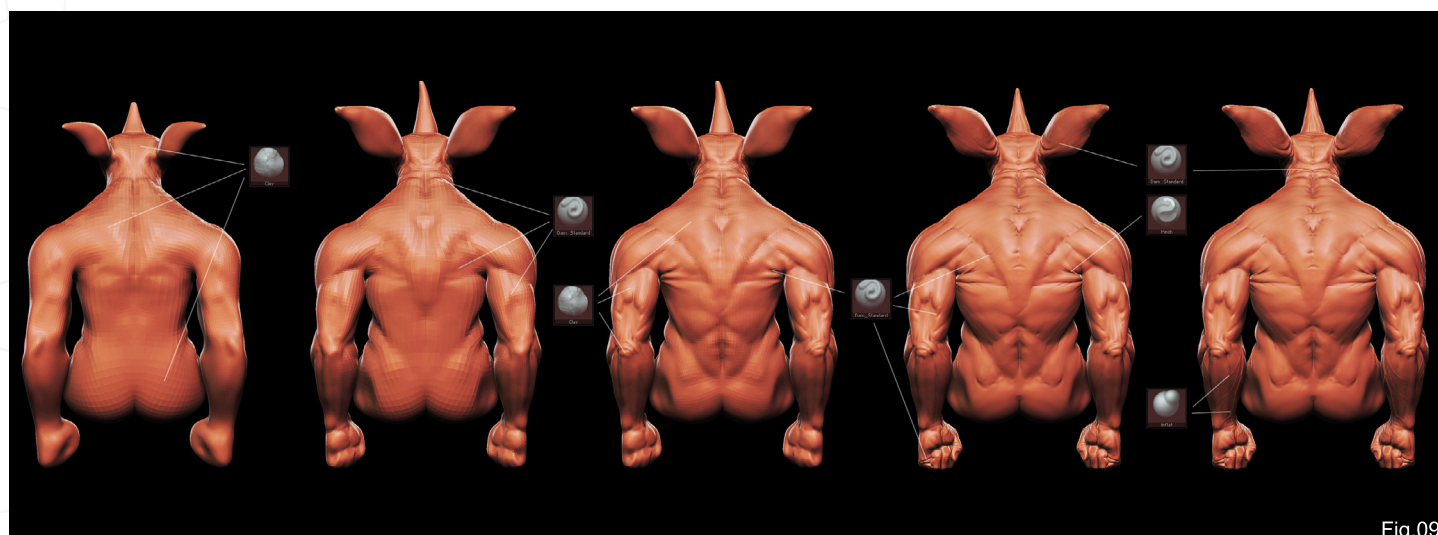
Fig.09

the ankle bone and muscle relations right off the bat. It's important to finish off the pose of the feet so that we can work on the details expeditiously. So get those references ready!

To pose correctly, it's important to have a rough idea of where each of the toes are, so start by laying those in, working in somewhat broad strokes. Then you can start to refine the toes a bit further.

At this point you'll probably find that you're starting to fight topology and stretchy faces that you want to try to flatten and work around. In the end, because you'll need clean low res geometry for the next part of this tutorial, it's probably a good idea to retopologize the feet later on. So for now, just focus on getting the sculpt working as best you can and then we'll look at cleaning up the retopo later on.

Continue by cutting in between toes and adding toenails. For the toenails, mask off the skin areas surrounding the nails and then use the Move brush to pull them out a bit. After this effort, pop out the tendons on top of the feet
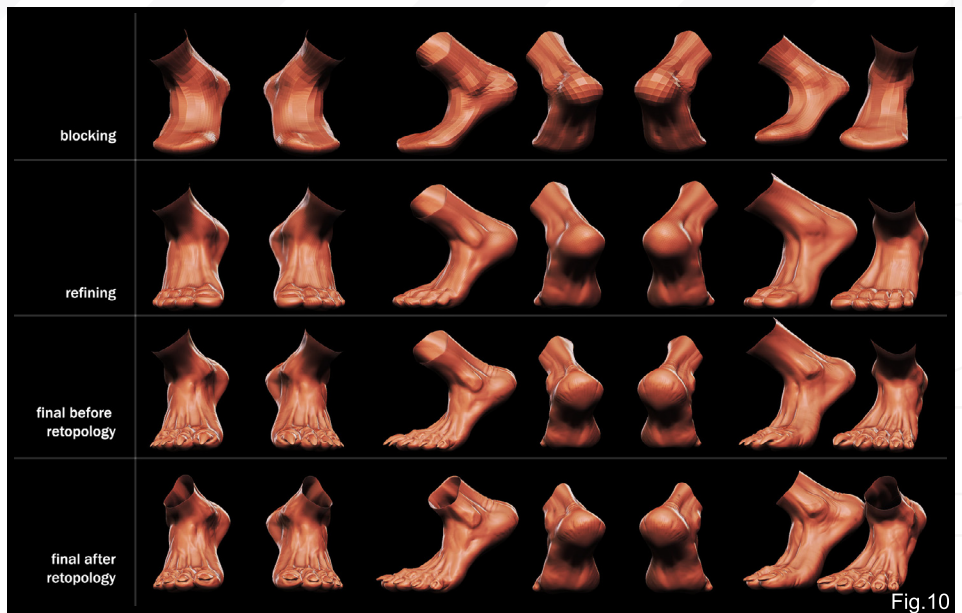
Fig.10

that attach to the toes. Then work on the heel a bit and cut in some folds on the skin over the Achilles tendon (**Fig.10**).

Hands Refining:

Free movie 10 – download here

Again, separate out the hands as another polygroup so that we can quickly isolate them while we work. Since we basically have a big

hunk of mass in front of us to work with, start to mold out the basic form of the whole fist.

Using the Dam standard brush and Clay brush, rough in the fingers and thumb - paying close attention to where the thumb should lie across the index and middle fingers. Then stroke in the tendons on the top of the hand, as well as the meaty masses in the palm that bulge and flex in this fist position. The tricky part is getting the folds of the skin to look right since there's a lot of action going on, especially between the index and thumb, as well as the pinky. This is when it's good to use the Inflate brush.

After cutting in the folds with the Dam standard, just puff out the skin a bit with the Inflate until you have the desired bulge effect. Also, pay attention to where you should be seeing bone against skin versus where you see bulgy skin folds and meaty masses. There should be a lot of tension in the knuckles and the tendons. The area where the fingers smush together and press up against the palm should have the appropriate indication of pressure and energy.

Give the knuckles some wrinkle cuts across the joints and also sculpt in the thumbnail using the same technique we used on the toes. Then take a little bit of time to go over the whole hand and tweak areas and put in more small
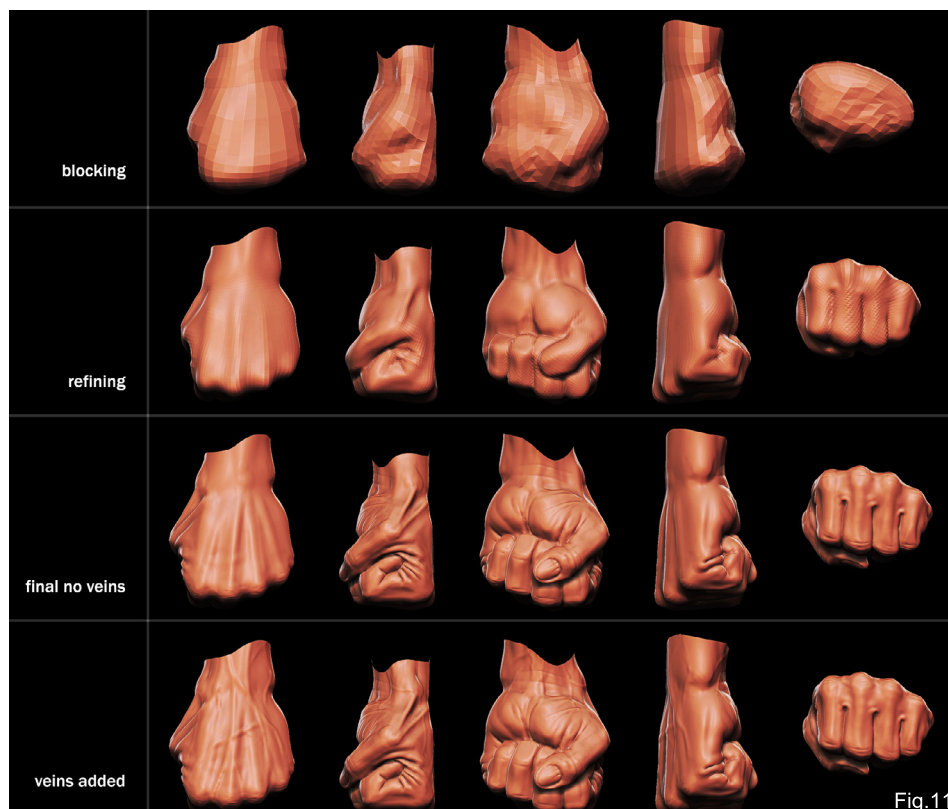
Fig.11

details like wrinkle cuts. At this point, I suggest you keep checking your work against anatomy reference, as well as your own left hand (**Fig.11**).

HEAD DETAILING:

Free movie 11 – download here

Time to add some more details to the head! Let's add things like crow's feet wrinkles next to the eye, folds across the nose, small muscular bulges around the mouth, eye bags, forehead wrinkles, brow definition, and so on.

We haven't spent a lot of time on the horn area yet, so lay in a mask around the horn (holding the ctrl key), invert it (ctrl key on the canvas), and then begin to inflate the skin surrounding the horn. Inverting the mask again, lay in some cuts on the horn using the Dam standard brush. It's important to do all this with symmetry turned off, to give your sculpt a more random look.

Do a bit more cleaning up on this area and then work on getting the horn design to transition into the rest of the head by laying in more lateral wrinkles that circumscribe the horn. Then it's a matter of cruising around the rest of the head and finding areas that need fine wrinkles and design clarification. This is when your sculpt can really come alive so I encourage you to spend a good amount of time honing the head. However, try to stay away from "noodling" or overworking

Fig.13

Fig.12

your piece because it can tend to start to degrade your model's design and make it look "noisy" (**Fig.12**).

FINAL DETAILING:

Free movie 12 – download here

This is the phase of the sculpting process that can be a lot of fun if you take your time. Identify areas that need more clarification or design indication and work those out. Add more wrinkles, folds, fine lines, subtle underlying forms, etc. and make sure you have enough skin overlaps and surface randomness. Since

the major form is pretty much done by this point, it's a good idea to hop around the whole model and avoid overworking any specific areas. Just keep rotating the model to find spots that seem plain or too defined - which is something that can be easy to do with muscular sculpts such as these.

ADDING VEINS:

Free movie 13 – download here

For veins it's back to the bodybuilder references. Start a new layer in ZBrush and use the StandardTwo brush (also created by Fatmir Gjevukaj). It can also help to use the lazymouse feature to keep the strokes smooth. Pen pressure is also important when you're doing vein work.

Smooth out some parts of the veins, as they don't completely protrude all over the surface. Since this character is pretty ripped muscle-wise, you'll probably end up with lots of veins, but I think that works well. Don't forget about the forehead, temples, ears, or the neck, which is where you'll find some really good vein action going on.

At the end of the vein process, tone down the layer to about 0.75 (down from the default of
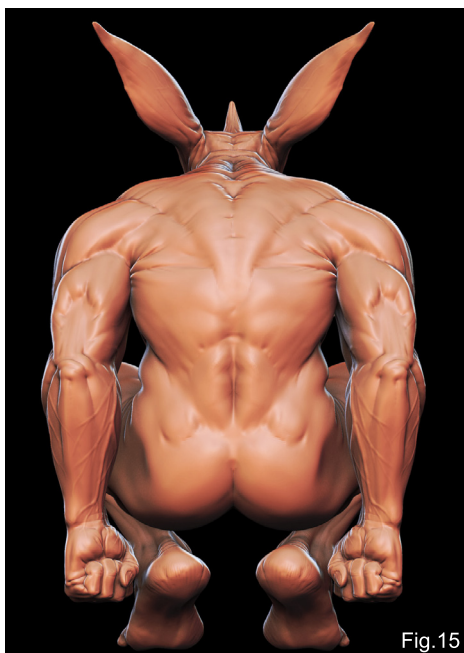
Fig.15

Fig.14

1.0) to trim back the effect. You can also go ahead and add pupils to the eyes during this session to give them a little more pop.

FINAL:

After all the sculpting, it's now time to do a retopologization of the mesh for the feet and some for the face. It's probably best not to subdivide the mesh again, because this might lead to a slow mesh, a lagging response and millions of polygons!

Now I'm not going to go into all the details of the retopo process, but it should definitely help to save some time by adding more base polygons and giving you a better flow to the toes, eyes, mouth, and nose.

Once the retopo and projection processes are complete, finish the sculpt by cleaning up the new mesh a bit in those same areas and you can call it done!

I hope you've enjoyed this tutorial! All in all, this was a great experience for me as it allowed me to create such a cool character, as well as test my knowledge of anatomy. I found new ways to push myself and tried new techniques for sculpting in general (**Fig.13 - Fig.16**).

Note from the Editor:

Jesse Sandifer has kindly provided 13 movies to accompany this tutorial, which you can download individually from the links at the beginning of each modelling stage, or as a group by clicking on the free movies icon at the end of this tutorial. So for a real insight into Jesse's working practice, click to download now and enjoy! Please note that the movies have been supplied as .wmv files of up to 40MB each, so please be aware of their sizes when downloading the files. And of course: enjoy!

Jesse Sandifer

For more from this artist visit:

http://www.jessesandifer.com

Or contact:

jessesandifer@gmail.com

Fig.16

www.cgoverdrive.com

16 – 19 June 2009
HALL 9, SINGAPORE EXPO

**CG
OVERDRIVE
2009**

- Comprehensive Showcase of Computer Graphics Technologies
- Knowledge-centric Conference and Professional Tracks
- Opportunities Galore at Recruitment Overdrive
- Impressive Gallery of Digital Art & Short Films Screening

Organised by:
VCO Visual Communication Order

Strategic Partner:
Singapore Exhibition Services Pte Ltd

Supported by:
mda Media Development Authority Singapore

3dsense Media School School Of Interactive Visual Arts

Held alongside:
BroadcastAsia2009

FANTASY ORC

Welcome to the Speed Sculpting section of 3DCreative magazine. Each month we will give two talented ZBrush sculptors a brief and a base mesh from which they are to interpret and speedily sculpt a model within a suggested time. Here we will show the stages of creation of their "speed sculpts" in the form of mini tutorials. You will often find free movies to accompany these tutorials, and we hope that this new series will be successful and thrive for many months to come!

This month our two skilled speed sculptors are **Jesse Sandifer** and **Magdalena Dadela**, who are tackling the brief:

Fantasy - Orc

If you'd like to follow along with these tutorials, we have provided the same free base mesh for you that we also gave to these two artists for their own speed sculpts. Download your own base mesh from the **Free Resources** logo below and get sculpting! Enjoy!

FREE RESOURCES
DOWNLOAD HERE

SPEED SCULPTING

MAGDALENA DADELA

CREATED IN:

ZBrush

This brief was truly a lot of fun to work with, especially for a big fantasy buff like myself. An orc usually makes me think of a huge, burly beast with a large jaw and an axe in one hand – an obvious influence of the *Warhammer* and *World of Warcraft* franchises. This was something I wanted to avoid right from the start. Orcs are great warriors and they usually die fighting. That's where the idea of an old orc veteran, very surprised by the fact that an enemy arrow has finally caught up with him, came to me. It also allows for some humour, too, which I like a lot.

Once I'd decided what I wanted to do with the brief, I looked for a few references of orcs and humans, on both the Internet and in my
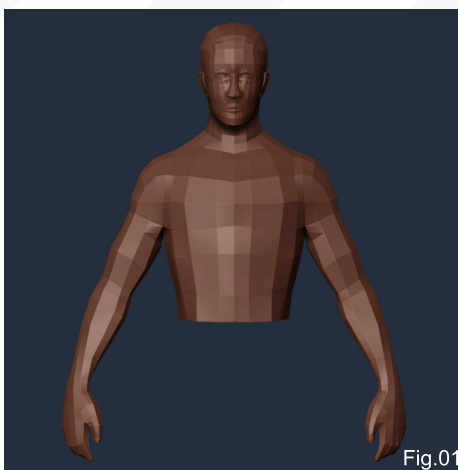
Fig.01
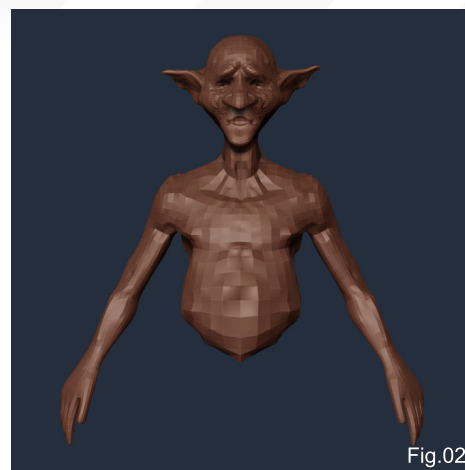
Fig.02
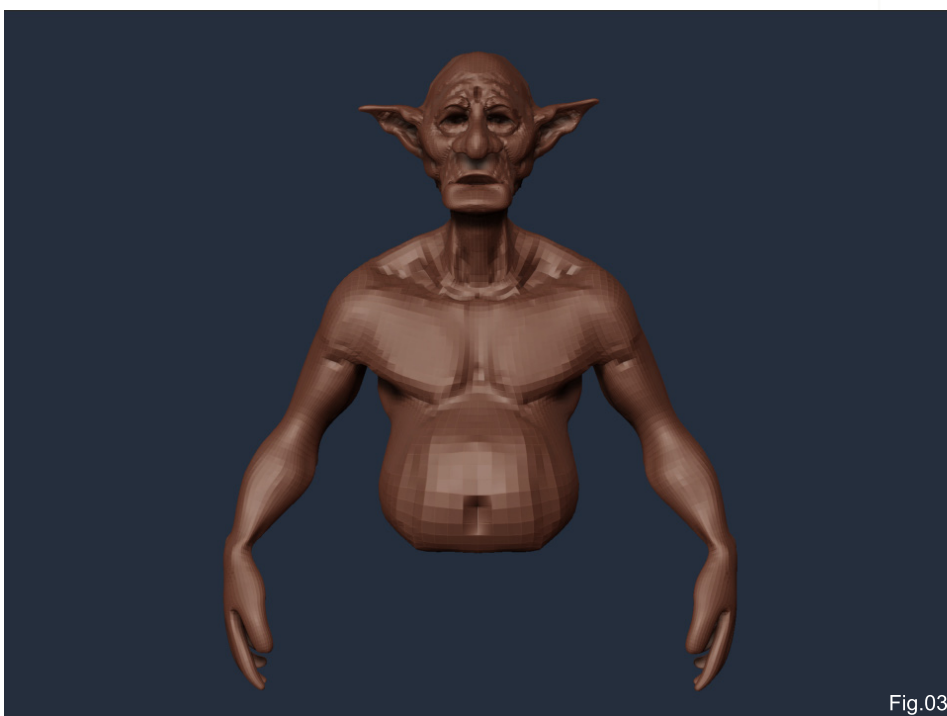
Fig.03

Fig.04

own image collection, to use as a rough guide. It's always best to use references, even if the work you're doing is an original idea, especially if you only have four hours to complete the character.

The base mesh I started with was a simple humanoid torso (**Fig.01**). I spent the first 15 minutes roughing out the general shapes, using both the Move brush and the Standard brush, interchangeably. I didn't really touch the settings of these brushes at all at the beginning. I did, however, change the setting of the Smooth brush as soon as I started work, by dialling it down to about 20 from the default setting of 100. This way I could do some delicate smoothing, even on the lowest level of subdivision, without destroying the silhouette. The brush is really strong and destructive otherwise.

I knew I wanted a big nose and ears, as well as a surprised expression, so I pulled out the geometry of the ears and nose quite a bit and pushed

up the inner corners of the eyebrows. My first intention was to make the orc rather thin too, almost like your average goblin (**Fig.02**).

I spent the next 30 minutes (**Fig.03**) experimenting with the shapes of the head and the torso, without caring too much about keeping the model clean. In the end I decided to give him some more belly fat and a sunken chest (he is old, after all), and a square jaw – more traditional for an orc.

Fig.05

Fig.06

Fig.07
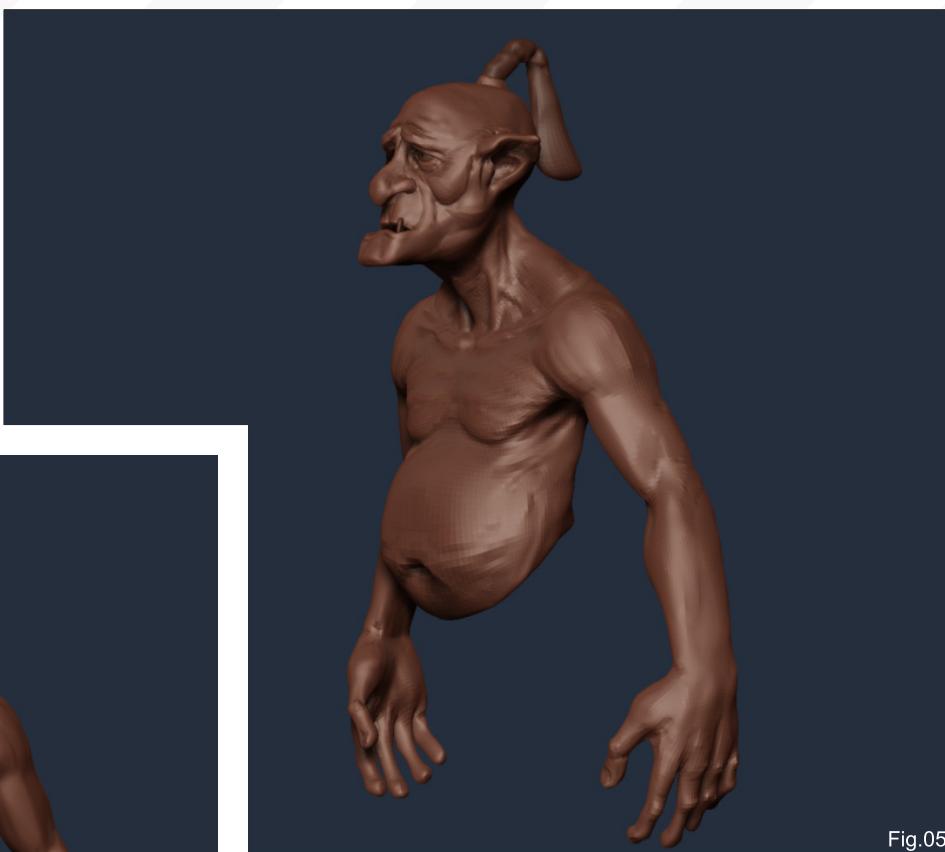
The next step was to subdivide the mesh one more time and start refining the details a little. I enhanced the knuckles on his fingers using the Inflate brush, and added some eyeballs using the primitive geometry available within ZBrush. I simply selected a primitive sphere from the tool palette, made a polygon mesh out of it, quickly sculpted a small iris and appended that to my character. Because of the scaling issues I had to use the scaling too (E) to quickly adjust the eyeball to the right size, and then I used the Move tool (M) to position it within my orc's head. After I'd done that I simply cloned my eyeball, which gave me a new tool in the tool palette (with the right dimensions). I used the deformation tab to mirror it, and also appended it to my character. This way I ended up with a fine set of eyes (**Fig.04**).

The next step was to add a ponytail. This time I appended a ZSphere to my model and quickly positioned it in place by using the Move and Scaling tools. After extruding it a couple of times I made an adaptive skin which I then replaced my ZSpheres with.

I also used another simple sphere to make a quick tooth, sticking out of the orc's mouth (**Fig.05**).

I spent the next half hour simply refining the details of the entire character, smoothing the geometry down and subdividing it a little further. I also gave the ears some initial asymmetry, which instantly gave my orc some personality (**Fig.06**).

It was finally time to do some posing and arrow shooting. I used ZSpheres again to create the arrow which pierces the character's head, and then the Transpose tool to pose the right hand accordingly (**Fig.07**).

I used the Clay Tubes brush to sculpt the arrow and give it the simple beaten metal look. Finally, I posed the left hand in a gesture of surprise and disbelief, adding further asymmetry to the character's face and a little bit of movement to the ponytail (**Fig.08**).

The last 45 minutes was spent mainly on refining some small details, like the fingers and the face, as well as adding a bit of rough colour to the entire character (**Fig.09**).

For the final image, I decided to composite together a few simple renders with different MatCaps and the colourise layer in Photoshop.

I hope you enjoy the final result and that it inspires you to try your hand at speed sculpting. It's both great fun and a good learning experience (**Fig.10**).

MAGDALENA DADELA

For more from this artist visit:

http://www.mdadela.com/

Or contact:

magda.dadela@gmail.com

Fig.08

Fig.09

Fig.10

JESSE SANDIFER

Created In:

ZBrush

initial basemesh — basic transpose and rough silhouette work — refining bony forms mainly in face — developing character and expression — rough blocking and basic facial look finished

Fig.01

Introduction:

Okay, so we all know orcs are awesome. And after the success and "mainstreaming" of orcs in *The Lord of the Rings* trilogy, we had a chance to see some interesting versions of them. I'm a huge creature fan so it's a real treat to get to work on an orc this time around. The concept actually came from an image that I found in my *The Lord of the Rings: The Art of The Fellowship of the Ring* (author Gary Russell). I wanted to explore Jamie Beswarick's design, which was a maquette of a Moria Orc. You know, the ones that live inside the depths of the mountains and have this pale skin and big eyes so they can see in the dark better. I also knew I wanted him to hold an axe as a prop, to give him something that would help to define his character. So here we go!

Cylinder3D — non-uniformly scaled — edgeloops added at end by isolating selection to be cut and hitting edgeloop button in Geometry rollout of Tool menu

Cube3D non-uniformly scaled — appended to handle subtool — sculpted into rough ax shape

Cylinder3D non-uniformly scaled — shaped into pick ax shape — alphas used to add textural detail and finalize pick ax sculpt

Fig.02

Part I: (orcmovie01.wmv)

I started this one by doing some transposing, masking out areas and rotating and moving them into a position that I liked. I worked symmetrically at first, but eventually I broke up the mirrored look and gave the pose a more dynamic look. I blocked out the mesh into polygroups so that I could easily hide/un-hide different parts of his body while I was working. Then it was just a matter of using the move, clay, and inflate brushes to push and pull on the model to get his overall silhouette and form working. Working at the lowest two levels, I adjusted his muscular form as well as his head shape (**Fig.01**).
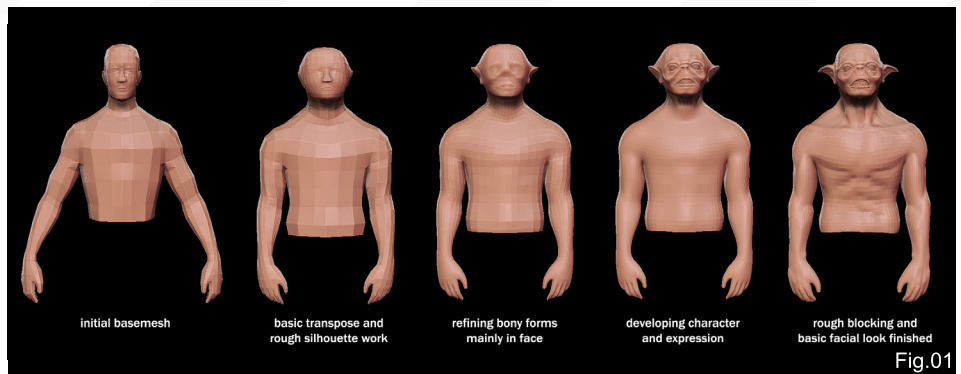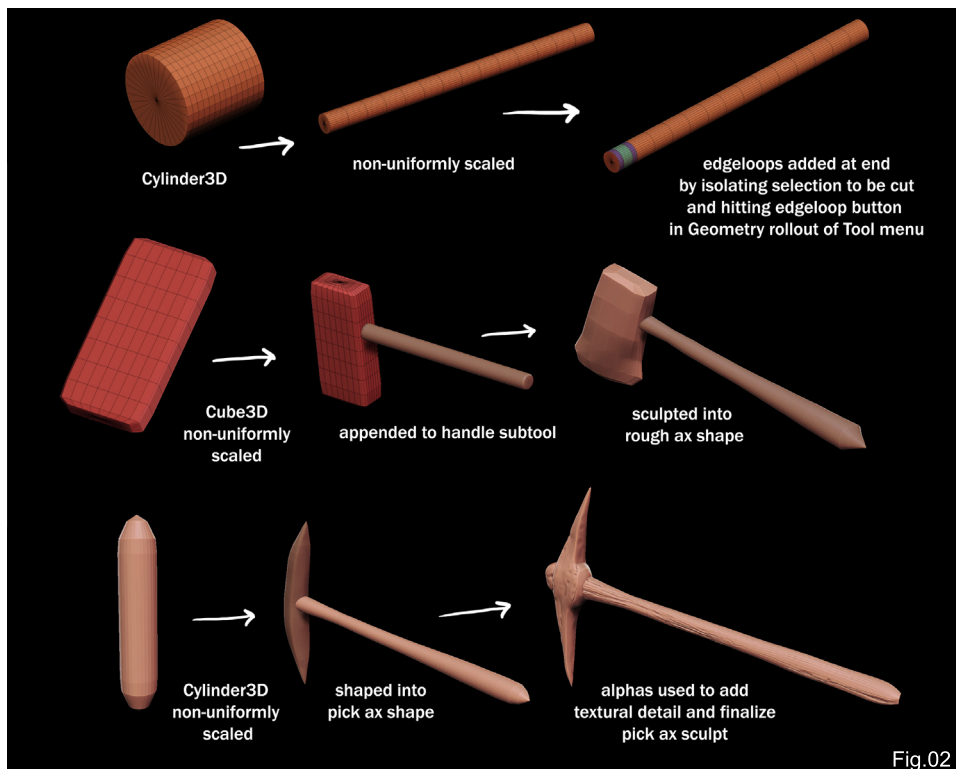
adjusted pose and ax addition — face lengthened and rough muscular anatomy blocked — refining muscle forms and hands detailed — head angle changed and surrounding areas adjusted — final model of orc and ax

Fig.03

rough adjustment of original mesh

skeletal forms

nostrils, eye sockets, lips, and neck roughed in

eyebags and ears cut in

teeth roughed in

face lengthened

details added like wrinkles, folds, skin texture and unique characteristics

Fig.04

For this character, the skull really protruded and helped to define the shapes on the face. So I got the basic things working, like the eye sockets, brows, chin, jawline, nostrils, and ears roughed in. Then I brought in some eyes as a subtool and moved them into position. I like to bring in the eyes early on mainly because I can then get the eyelids formed more realistically around a sphere, rather than just guessing.

Then it was just a matter of continuing to block in the facial forms and some major skin folds that defined the forms of the face. These were especially found in the nose area and eye sockets. After this, I moved back over to the body and laid in the basic flow of the muscles so that I could adjust proportions at a low level in the mesh.

PART II:

At this point, I though it was a good idea to bring a basic version of an axe into the scene. But before I could do this, I had to actually model

it! I'll run you quickly through the simple steps that I did for this, because unfortunately I'm not an expert with modelling with primitives in ZBrush. This was certainly good practice though (**Fig.02**)!

So to start off, I loaded a Cylinder3D and hit the MakePolyMesh3D button in the Tool rollout. Then I used the Transpose Master to scale it. Setting the scale handle from the top to the bottom lengthwise, I clicked and held the middle circle and dragged it to scale non-uniformly. This gave me the skinny, cylinder shape I wanted for the axe handle.

I did the same kind of thing with a Cube3D primitive for the axe head. So after moulding it into an axe head shape, I merged it with the axe handle using SubTool Master. Then I brought it over to the orc ZTool and appended the axe into the scene in the SubTool rollout. Then it was just a matter of transposing it into position so that the orc looked like he was holding the axe.

I also decided to change the shape of the axe head to more of a pick axe, rather than a typical wood axe. Duh, he's supposed to be working in the mines and breaking up rocks! So I then transposed the orc's arms and hands into a basic position to make him hold the axe. This is when the symmetry was broken and I started to adjust his pose. I twisted his right wrist to hold the handle with his palm face up and I raised his entire arm up a bit.

PART III:

I decided to make his face a little longer than in the original concept and I adjusted that really quickly. Then it was all about using the claytubes, clay, inflate, and Dam standard brush to start laying in the anatomy of the body. I basically just worked my way around the mesh and cut in forms based on how the muscles were flexed (**Fig.03**). For example, his right arm and right side of his chest needed to look different than his left because of the way he was holding the axe. The way I typically work is to

exaggerate a form first and then dial it back and smooth out stuff. I get more variety this way and it keeps me from having a bodybuilder every time I sculpt something!

The hands took a while to do on this one as he's gripping the handle. This is where a speed sculpt can go over an allotted time because there's so much detail to worry about. I try to improve my speed every time I do one, but at some point you just have to move onto other areas of the mesh. I didn't even have time for the nails or anything like that! I wanted to put most of the detail and time into his face and just have a good suggestion of form and pose for his body. I also wanted to loosen up his head and neck angle so that he looked more in character. So I did this by transposing it at an angle that was more suitable. After I got the right angle, I unmasked everything and cleaned up the areas that got warped in the process. It also gave me a good chance to put in some skin folds and that's always awesome. Then I just adjusted the eyeballs to fit the head angle.

PART IV:

At this point in the sculpt I had about an hour left, so I decided to add some details to the face. I started off with the teeth and I cut in the shapes with the Dam standard brush (**Fig.04**).
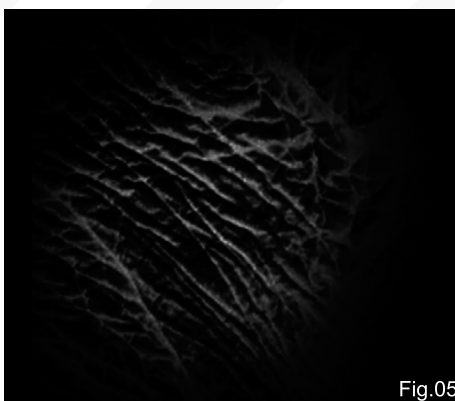
Fig.05
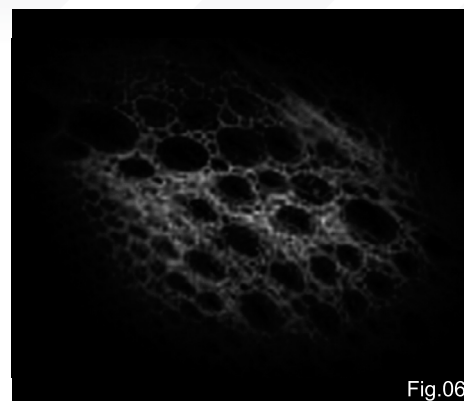
Fig.06

Fig.07

I just needed a suggestion of teeth here and didn't feel like I needed a whole lot of detail because that's another area that would take a bit of work to get perfect. I was happy with just the suggestion of some pointed messed-up teeth. Then I started cutting in wrinkles and bulges that would support the expression on his face. Since his mouth was a bit strained, I

added supporting wrinkles around the corners of his mouth and some textural ones above and below.

The eye-bags were another area where I sculpted in some finer lines. I also defined the eyelids so that they held the eyeballs more convincingly. The brow, nostrils, and ears got some attention as well. I find that the important thing in detailing is to not just add detail for the heck of it. The wrinkles and folds and cuts need to make sense on the face and the depth also makes a difference too. Some nice fine wrinkles and fat lumps is always a good thing to add in the right spots. Just putting a big slice over his eye or lips doesn't always make the sculpt cool!

I also added some textural markings on him by using some alphas I've gathered over the years (**Fig.05 & Fig.06**). I used the clay brush and a dragrect to apply them on the surface. I generally do them at a medium level of ZDepth, then I smooth back the edges and repeat. Since this was a speed sculpt, I only put them on the face and key areas of the neck and a few spots

on the body. In real production mode, I'd apply them all over the place to give the skin a good texture and the orc a finished look.

Part V:

I thought it'd be good to take a bit of my remaining time and add details to the axe, so that it matched the character of the orc. I just went to town on further defining the form of the axe head and adding cuts and dings on the surface. I used a couple of ZBrush alphas to do some quick damage to it too. For the handle, I basically raked it, slashed it, and cut it up to look more like an old wood handle. Nothing more fancy than that (**Fig.07**)!

Conclusion:

In essence, a speed sculpt is a piece of 3D concept art. It's okay to keep it loose. It's okay to not add every bit of detail. Sometimes it looks better when it's simpler. The main things I try to focus on when I speed sculpt are the form, silhouette, pose, and character of the whole thing. And whatever detail I can cram in after those things are clear, I'll definitely go for because we all know detailing is fun. Thanks for reading!

Jesse Sandifer

For more from this artist visit:

http://www.jessesandifer.com

Or contact:

jessesandifer@gmail.com

"I STRONGLY ADVISE
YOU TO TAKE YOUR
OWN REFERENCE
PICTURES, AND STUDY
YOURSELF IN THE
MIRROR AND IN
PHOTOGRAPHS. NO
MATTER WHAT THE BUILD
OF YOUR CHARACTER,
YOUR OWN BODY CAN
GIVE YOU A WEALTH OF
INFORMATION"

Vampire
Character Creation
ZBrush

Welcome to the ZBrush Character Creation tutorial series. Each month, an artist will take us step-by-step through the transformation of a clean, generic head base mesh into a character type of 3DCreative's choice! We thought that topics such as a wrinkled, gaunt, old man, a steroid-pumped guy with popping veins, an extreme tattooed and pierced dude, and even some real extreme cases of personality disorders in the form of a vampire and a werewolf, would be fantastic for detailed sculpting work! This seventh tutorial covers the development of a Vampire, by **Joseph Harford**. Next month: Rafael Ghencev shows us how to sculpt a Werewolf, and the series will finish with Frankenstein's Monster by Rafael Grassetti. Enjoy!

Vampire

CREATED IN:

ZBrush

What defines a vampire: the long cloak, the slicked back hair, the blood dripping from their teeth? The truth is that it's very hard to define characteristics of what makes a vampire, from a character point of view. The bust of a vampire must capture the core elements of what I believe a vampire should be – frightening, threatening and fierce.

REFERENCES

I start out searching the web and books for references. Something I find very useful is to put together a visual ideas sheet, with references on the appropriate themes. This sheet makes good inspiration and provokes ideas and in this case, I fill it with vampires, from historic ones up to today's modern re-interpretations. I want to stay clear of the sexy female vampires, or the twilight hero vamps, and look towards a more classical approach: a dominant, mid-40s male, strong in build and character. For the pose, I want something "in the moment", capturing an expression for the viewer to piece together.

After finding the references and building up bit of back story, I have the character firmly in mind. I can visualise the final image and so now is the

Fig.00

Fig.01

Fig.02
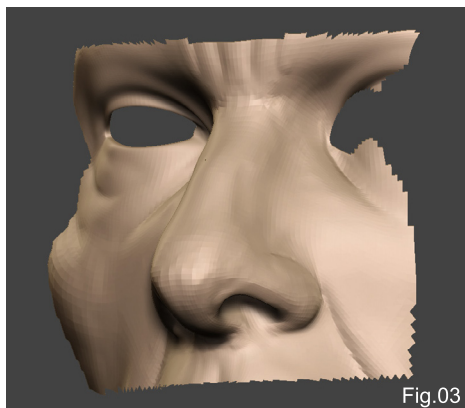
Fig.03

time to search for references to help me achieve it. This means pose references, anatomical diagrams and texture references. Usually I will have these on my second monitor, or printed out and stuck on the walls in front of me (**Fig.00**).

Among these are pictures of myself in the pose I want my character to strike. The best anatomical reference you have is the one sitting and reading this now, and I strongly advise you to take your own reference pictures, and study

yourself in the mirror and in photographs. No matter what the build of your character, your own body can give you a wealth of information. You can simply extrapolate from there with additional material for ultra thin or muscular characters.

SCULPTING

I start with the base mesh from 3DTotal, created by Rafael Ghencev (as used for all previous chapters of this series) – a well modelled

bust with edge loops following the flow of the muscles in the face (**Fig.01**). It provides good deformation for animation, but more importantly here, it provides a free and easy base to sculpt upon. Equal quad sizes and good topology allows no pinching to occur and divisions to be added uniformly across the mesh.

I start by adjusting the global proportions of the head to match the references I'm using (**Fig.02**). Bearing in mind the structure of the skull itself, my characters always start out a good deal thinner than they will end up. I block out the main forms of the head next, placing the cheekbones, nasolabial fold and the sternocleidomastoid muscle of the neck. The collar bone is an important one to place as well, as it defines the bottom area of the neck and gives the character a solid and properly-constructed appearance. Continuing blocking out the main facial masses, I add volume to the masseter muscle, which runs from the mandible (jawbone) into the anterior two-thirds of the cheekbone.

Fig.04

Fig.05

Fig.06

For the bulk of the sculpting, I use the Clay brush. I find it a fantastic tool to add geometry in a traditional fashion. Coming from a traditional art background, I love to combine real material techniques with the speed, efficiency and all the other benefits that come with working digitally.

I work in a layered manner, and seldom use anything other than the Clay and Move brushes for these initial stages. Later I find the Standard brush, tweaked with a 70+ brush mod setting, invaluable for adding wrinkles and creases in the model.

After the main masses are complete, I go over the face, refining and adding skin, folds and the large wrinkles (**Fig.03 – Fig.05**). I work on the eye shapes, making sure they sit around an eyeball and fall in the correct manner. Eyes are extremely important and every aspect of the

eyes, not just the shader, will be scrutinised for accuracy. The lacrimal caruncle is one of the key parts of making a realistic eye model and is often neglected.

To give depth and structure to the ear, I mask off the section at the top and invert the mask (Ctrl + left-click outside the model), smooth the mask (Ctrl + left-click on the model), and then using the Move tool I pull down the geometry to hang over (**Fig.06**). This is a great trick to use on wrinkles and eye creases, as it gives weight to the geometry. I mix this up with using a brush with gravity turned on to achieve the same effect.

When all the main anatomy is in place, it's time to pose the model. It's vitally important to now turn on "Posable Symmetry", which you can find in the Transform menu (**Fig.07**). This will allow you to keep modelling symmetrically, even after posing your character.

I use a mixture of masking and the Transpose, Move and Rotate tools now to position the character in the correct pose (**Fig.08**). I'm not worrying too much about the problems that arise with the anatomy of the neck, just that the pose is correct and the stretching is minimal. Once everything is in its right place, I sculpt with the clay and modified Standard brushes to bring back the realism and accuracy into the pose, concentrating on the neck twist and how the muscles will react to the head turn.
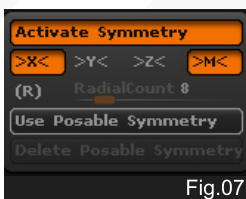
Fig.07

Fig.08

Fig.09

Fig.10

The mouth will play a big part in the image by housing the terrifying fangs, so while pulling a face in the mirror and using the reference images, I sculpt the lips (**Fig.09**), using the Move, Clay and Inflate brushes. It's important here to remember how the jaw moves the lower lips down, and how the teeth and gums will shape the way the lips sit over them.

And with that said, it's time to move onto creating the teeth now. I create a new ZSphere and using symmetry I add three new spheres on either side (**Fig.10**). Using the Move tool with a very low ZIntensity I can position these spheres in a gum-like arc shape. Clicking "Preview" under Tool > Adaptive Skin will show us how the model will look. The default settings

work and I go ahead and click Make Adaptive Skin (**Fig.11**). This creates a new model which should appear in the tool display; if you switch to it, it's now editable, just as our main model is.

Switching back to my main model, I hit the Subtools > Append button, and append in my new gum tool. I do this twice and position each gum correctly (**Fig.12**).

The teeth are created in the same way, only utilising two ZSpheres positioned vertically. Each tooth is subsequently shaped, appended and positioned, with the surrounding gum area sculpted to surround them (**Fig.13 – Fig.18**).

Continual refinement leads to the tweaking of the whole model, refining forms and maintaining

Fig.11

Fig.12

Fig.13
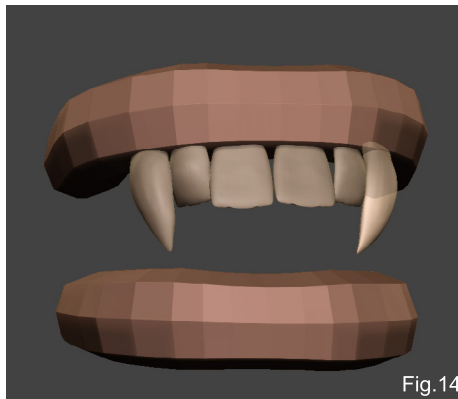
Fig.14

Fig.15
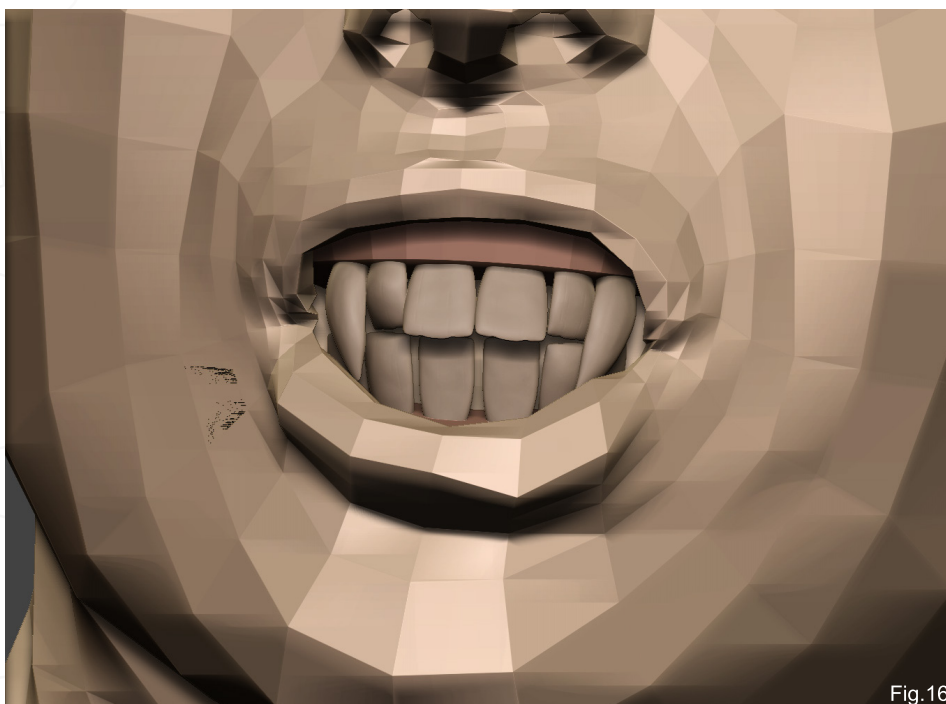
Fig.16

the volume of the surfaces. I add eyebrows on a separate layer to check proportions, as the lack of eyebrows and hair can often throw one off and trick the mind into seeing a character very differently (**Fig.19**).

TEXTURING

Texturing a character is a vital part of achieving a finished piece – a part that can be feared. There is no reason to shy away from texturing models within ZBrush as the tools are designed to be intuitive and efficient. I spend some time blocking out my colours using Polypainting. Setting my Clay brush to RGB and turning off ZAdd, I make sure Tool > Texture > Colorize is on, choose white as my colour and hit Colour > Fill object. This bakes in the colour white onto my model, and now I can start painting it.

I choose a skin tone that I feel will fit and paint on the model, choosing a deeper red for the ears, nose and lips (**Fig.20**). I add subtle blues under the eyes and into the lips, and decrease the saturation for the stubble areas on his chin and neck. At this stage I'm just blocking out colour ideas. Still using the Clay brush, I set the mode to spray, rather than dots; the alpha to Alpha_07, which ships with ZBrush; and I turn down the colour spray to 0.1. I choose a reddish colour and spray this onto the model over the cheeks and almost the entire surface, changing the colour to blue, yellow and varying the size and opacity. The spray brush works in a similar way to building up colours on a silicone mask in real media, using an airbrush to create skin texture. Those same techniques can be modified and applied digitally very easily.

Once the colour scheme is fully blocked out, I move onto achieving a more realistic skin by combining photo textures at a lower opacity (**Fig.21**). This shows through the colours and tones I've created before and adds a degree of noise and variation.

Before starting the tutorial I created a small library of facial parts cut out for use in texturing,

Fig.17

Fig.18

Fig.19

Fig.20
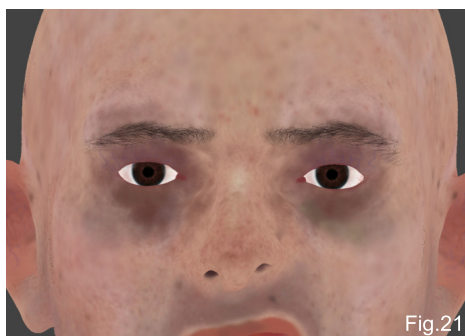
Fig.21
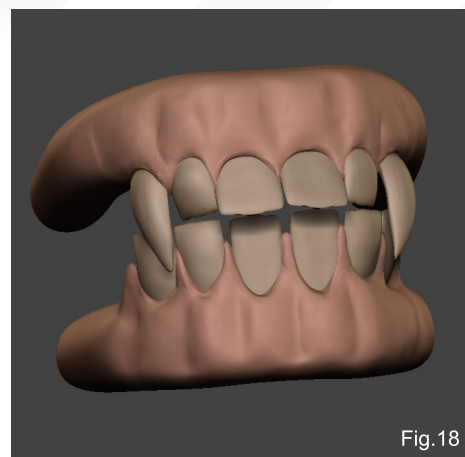
and I draw upon those and Projection Master to texture the vampire. Using a Plane3D tool and Projection Master, I drop the model onto the canvas and drag out a Plane3D. Rotating, scaling and positioning it over the area in question, I load in the particular texture and turn off ZAdd. Using the fast preview I can see the outlines of the model where it's going to be placed. This is really useful for visualising where you're putting the texture.

I project hair textures onto the model from the side, top and back, using the Clone brush to clean up any transitions and problem areas. Cleaning up and projecting small areas until the whole model is done is by far the most time-consuming section. As you can see in the image, once all these parts have been projected using the 'Fade' setting of Projection Master, they blend together very well to complete the head texture (**Fig.22 – Fig.23**).

I take a few moments here to make some tea and come back to the texturing with a fresh eye, and to admire the finished product before moving onto rendering.

Rendering

Rendering brings life to characters; it's where we get to use all the fancy effects programs shipped with ZBrush and it's where we can achieve realistic lighting and materials, model our character with light, and really sell an illustration (**Fig.24**).

I achieve the final renders of the vampire by turning on Soft RGB, Fog, Depth Cue, adding some noise through the material, adding Shadows, and making adjustments to the saturation and contrast.

A good tip I've found is to set quite a high aperture, a high shadow depth, turn ZMode on, and use whatever number of rays you are comfortable with. My final images were rendered with just 70 rays, in a compromise between aesthetics and render time.

Fog is a great way to add depth to your renders and ZBrush makes it a breeze to set up. Just drag the depth of the first slider and move your mouse onto the canvas, letting go on the spot where you want your depth to start. The other slider of course sets the part where you want your fog to be at full density.

Fig.22

Fig.23

Fig.24

The final images reflect my original vision (**Final.01**); the power of ZBrush allowed the competition in just one program and the process was enjoyable, efficient and manageable. Thanks to my wife for her ideas and input, and the 3DTotal team for their support and planning.

To end, I'll finish on a tip for creating video within ZBrush: Turn off Anti-Aliased capture if your PC is anything but extremely high-end. The

slowdown is too noticeable to comfortably record and work at the same time.

Note from the Editor:

We hope you've enjoyed Joseph's take on a Vampire for this seventh chapter of the ZBrush Character Creation series. Joseph has kindly provided 13 time-lapse movies captured in ZBrush whilst he worked, so they should give you an extra insight into his workflow and give better understanding to the techniques covered in this latest tutorial. So sit back, relax and enjoy this month's instalment. Rafael Ghencev will be back next month with Chapter Eight, and Rafael Grassetti will be finishing off the series in style with his interpretation of Frankenstein's Monster.

Joseph Harford

For more from this artist visit:

http://josephharford.com/

Or contact:

Josephharford@googlemail.com

Movies 1 - 3

Movies 4 - 6

Movies 7 - 9

Movies 10 - 13

MAKING OF BY HENRY LEE (PASHKOV)

PATROL

"IN SPACE, ANY KIND OF ENERGY FADES WITH DISTANCE..."

Henry Lee (Pashkov) takes us through the different stages of his creation process, from the initial concept, modelling and rendering to flame effects

PATROL

CREATED IN:

3ds Max and Photoshop

Hello there, I'd like to present the process behind the creation of my image, "Patrol".

CONCEPT

In the first phase of work, I created the concept for the scene and spacecraft. I then worked up the concept, and finally came up with these (**Fig.01 & Fig.02**). Opening up Photoshop I created a new file sized 3000*2000 pixels, at 300 dpi and labelled it Test_001. This was going to be the base of my future image. On the blank canvas I created a layout for the scene (**Fig.03**), and then closed Photoshop.

FROM 2D TO 3D

The second phase of work was the creation of the previously established scene in the 3ds Max editor. So I opened up 3ds Max and created the main scene file, which I called Main_Scene_. Using the image I created in Photoshop of the marked layout (see **Fig.03**); I inserted it as the background of my 3D scene.

I created a box object and exposed it so that the inner and side structure of it coincided with the main lines of my background layout. I then
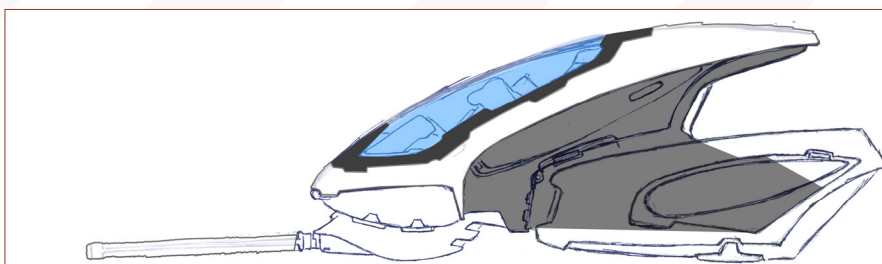
Fig.01
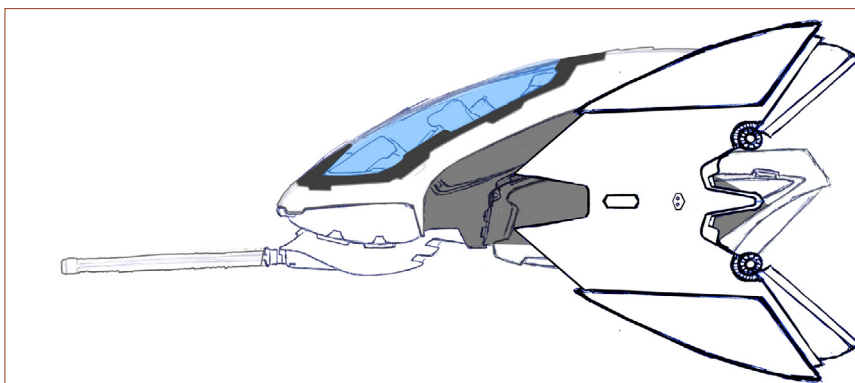
Fig.02
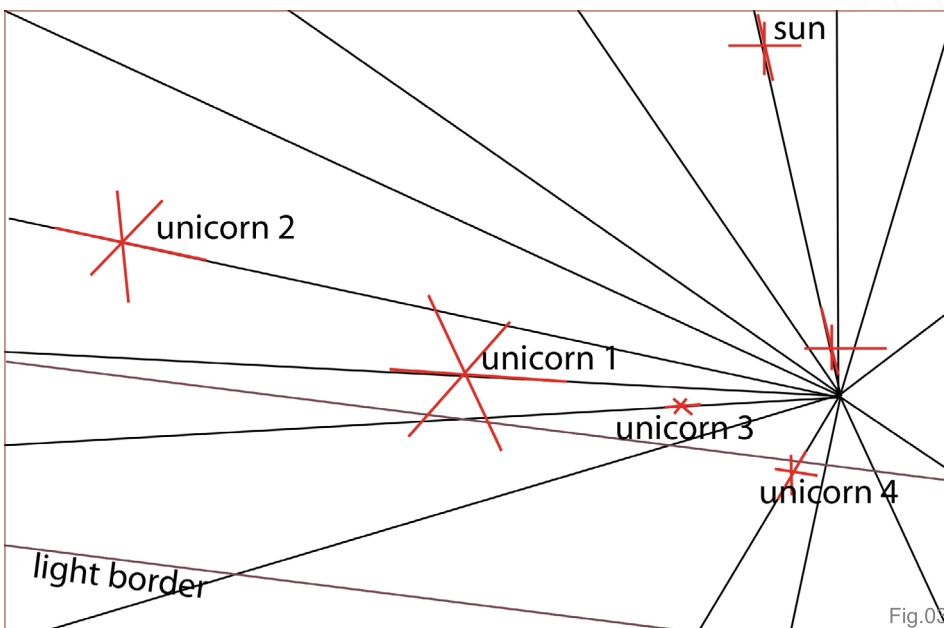
Fig.03
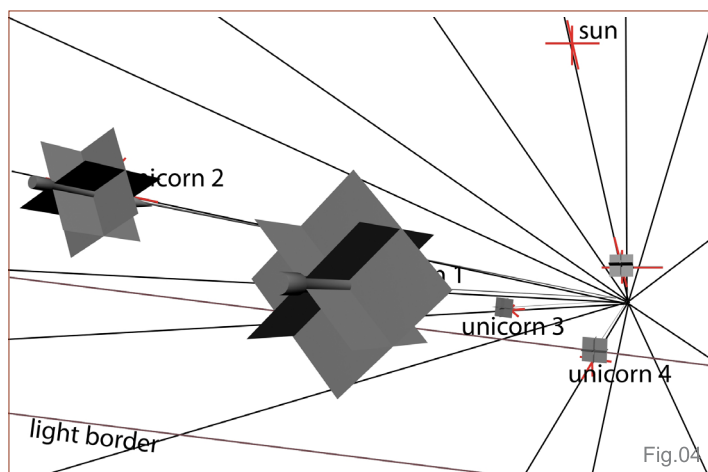
Fig.04

created an object, SShip_Pivot, which was made up of three planes, plus a cylindrical object. The cylindrical object was then tied to the facility, SShip_Pivot. I pivoted the same cylinder, locked the far end of it and combined it with the geometric centre of the scene.

Using copy, scale and displacement, I then moved the SShip_Pivot(s) in such a way that all lines coincided with the lines of my background (see **Fig.03**), and as a result, I got **Fig.04**, and then **Fig.05** when I viewed it in wireframe.

MODELLING

I decided to call the spacecraft Unicorn, because of the very outstanding

forward main gun. I won't dwell too much here on the modelling of this unit; I will just say that it took 8 days of 2-3 hours work to complete (**Fig.06**). The file was a ship called Unicorn_001.

Background

I opened up the file Test_001 (see **Fig.03**), created a new layer and drowned it in black. I created a wedge-shaped object and slightly deformed it to achieve the curve of a planet form (**Fig.07**). The resulting layer was then duplicated twice and the sections were set using the Blending Mode parameters of Vivid Light and Colour Dodge.

I opened the Blending Options for the first layer and changed the parameters of Outer Glow and Inner Glow (**Menu.01**). For the second layer (Vivid Light), the parameters of the Outer Glow and Inner Glow were also edited (**Menu.02**). Again, for the third layer I changed the Outer Glow and Inner Glow parameters, as shown in **Menu.03**. And here was the result of the changes (**Fig.08**).

Continuing work on the background, I added a nebula region (**Fig.09**), and as a result of the nebula and planet base combined, I achieved this image (**Fig.10**). Using cloud brushes, I then added various spots and brushstrokes to the planet area, which gave it more volume
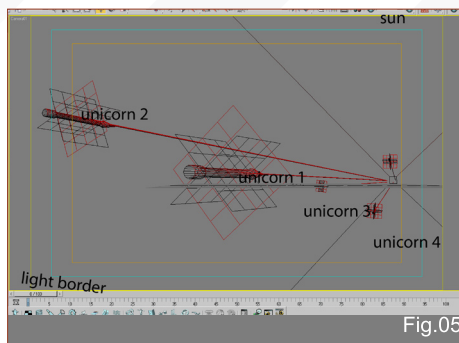
Fig.05
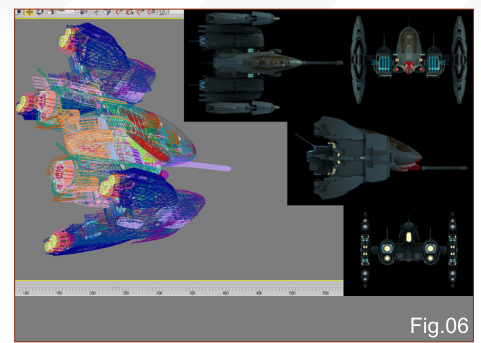
Fig.06
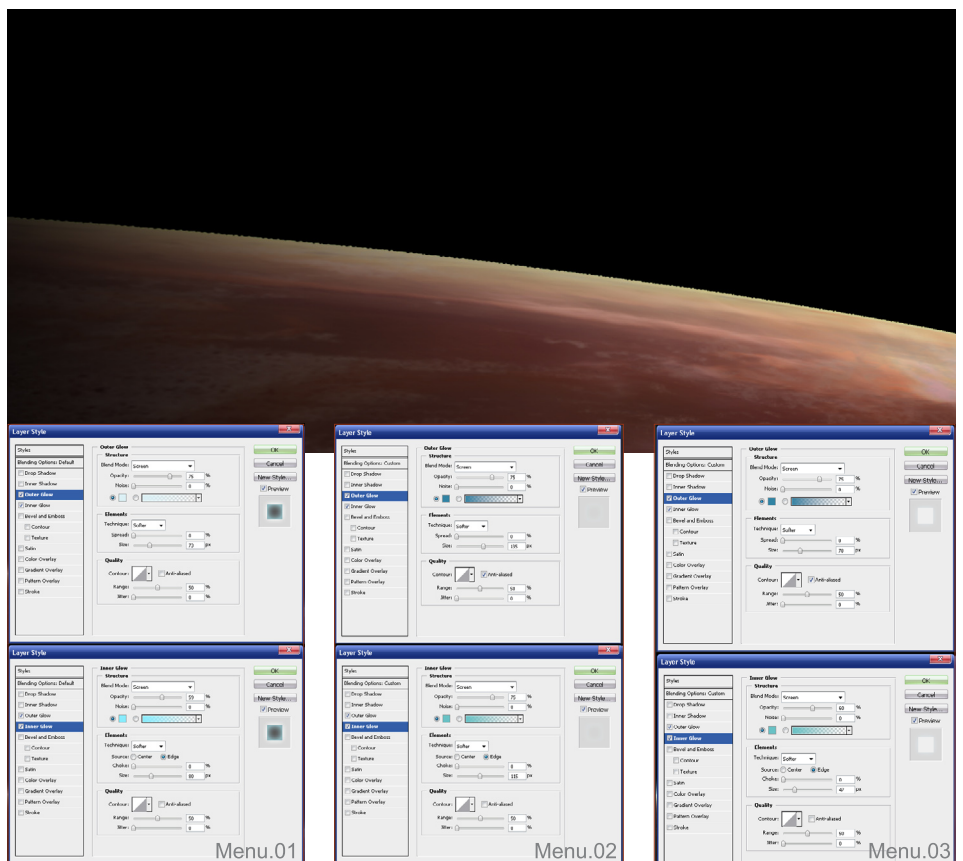
Menu.01

Menu.02

Menu.03
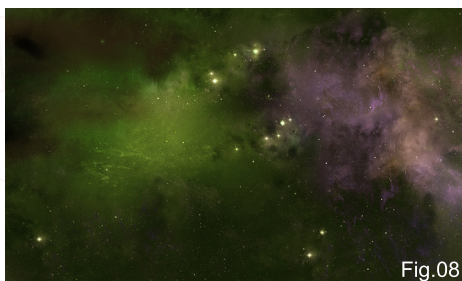
Fig.08
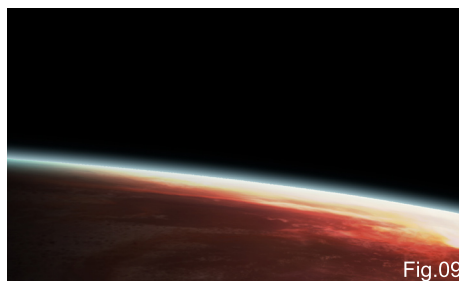
Fig.09
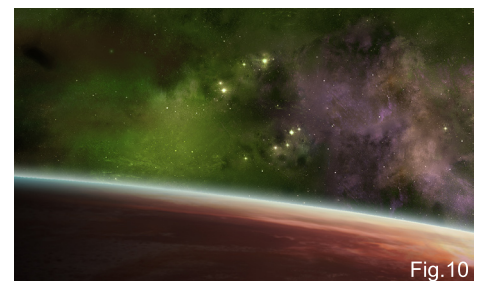
Fig.10
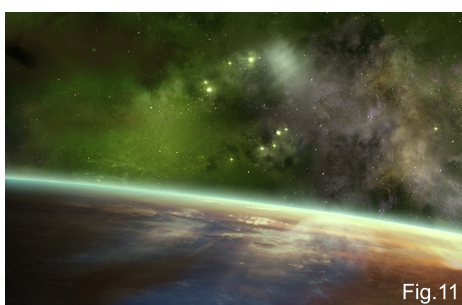
Fig.11

and a slightly more convincing convex shape (**Fig.11**). I then added a couple of filters, some Brightness/Contrast, and a Channel Mixer with the parameters shown in **Menu.04**. Here was the result (**Fig.12**).

To create the Sun, I made another layer and used the Flaming Pear: Solar Sell plug-in, to

create the small object (**Fig.13**). I set the layer Blending Mode to Screen before making a copy of it. I then consistently applied the Motion Blur (Amount: 10; Spin; Quality Best) and Gaussian Blur (Radius: 1.2 pixels) filters. In the layer Blending Mode settings, I set it to Screen at an opacity of 50% (**Fig.14**).

Menu.04

Fig.12
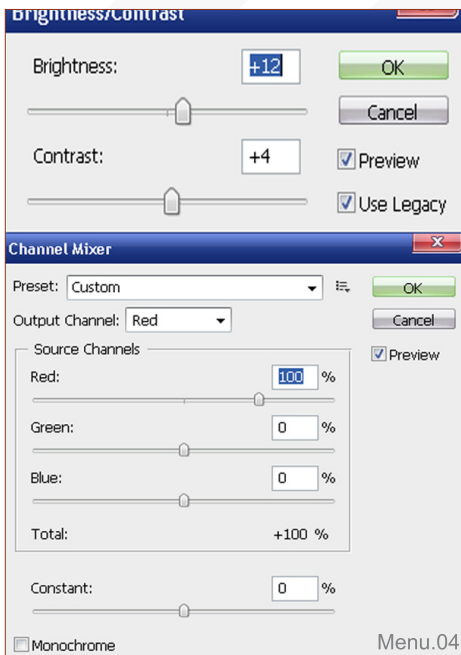
I copied this layer and set it to the Linear Dodge Blending Mode at opacity 100%. I then consistently applied the same filters to the image: Motion Blur (Amount: 20; Spin; Quality Best) and Gaussian Blur (Radius: 1.7 pixels). The result can be seen in **Fig.15**.

Once again, I copied the resulting layer and set it to the Hard Light Blending Mode at opacity 30%. And once again, I applied the same filters: Motion Blur (Amount: 50; Spin; Quality Best) and Gaussian Blur (Radius: 2 pixels). Here was the result (**Fig.16**).

I found the resulting picture to have too many red and yellow hues, and so in the lower left corner I added a few rough patches of dark blue shades. This zone was to play the role of the "solar terminator" (**Fig.17**).

A few more filters were added: Channel Mixer and Photo filter, which made the image more uniform in colour (**Menu.05**). I then edited the Curves and Colour Balance settings (**Menu.06**). The result was an image with alternate lighting zones, from the visual centre of the picture to its edges (**Fig.18**).

Okay, so with the background finished, let's move on.

Fig.13

Fig.14

Fig.15

Fig.16

Fig.17
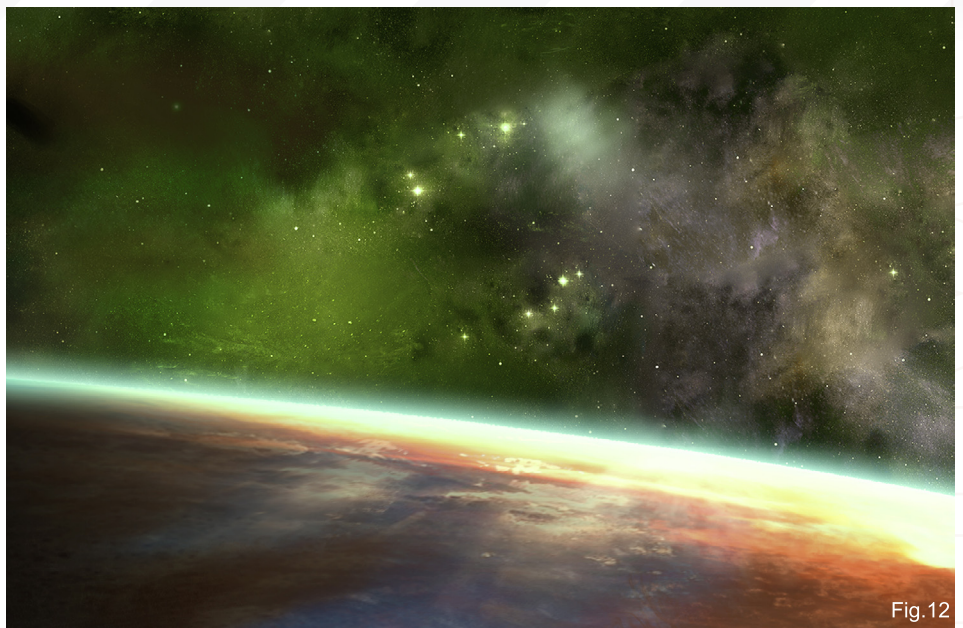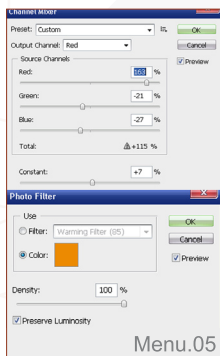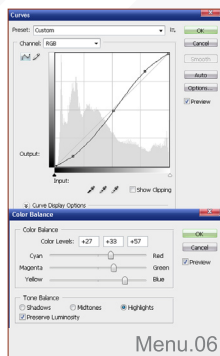
Menu.05

Menu.06
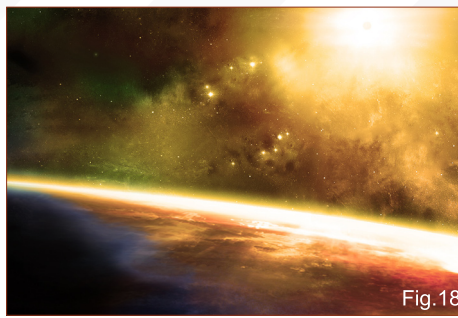
Fig.18
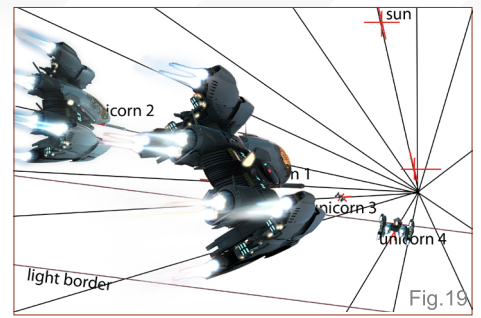
Fig.19

Rendering

Back in 3ds Max, I opened the scene which I called Main_Scene_. The file Unicorn_001 was then inserted into the scene and moved out so that its position coincided with the main axes of the SShip_Pivots (**Fig.19**). I rendered the resulting scene with an alpha channel, and inserted the result in the Photoshop scene, Test_001.

Flame Effects

For this, I used one light source, of the Omni type, and the free Trail plug-in from Mr. Kuznetsova (http://www.lastjedioutpost.cgtalk. ru). Basically, it's possible to use not just one source of illumination for the creation of a flame through the help of this plug-in. First of all, to achieve a high quality "blast", I changed the Particle Quantity parameter, which I set to 2000 (**Menu.07**). , so in the Brightness tab under Final, under the Particle Visualize Parameters section, I made it 30. I also increased the Initial/Final Balance parameter to 0.75. With everything done correctly, I ended up with the result shown (**Fig.20**).

Composition

At this stage it was all about refining the image (**Fig.21**). As before, I used some filters
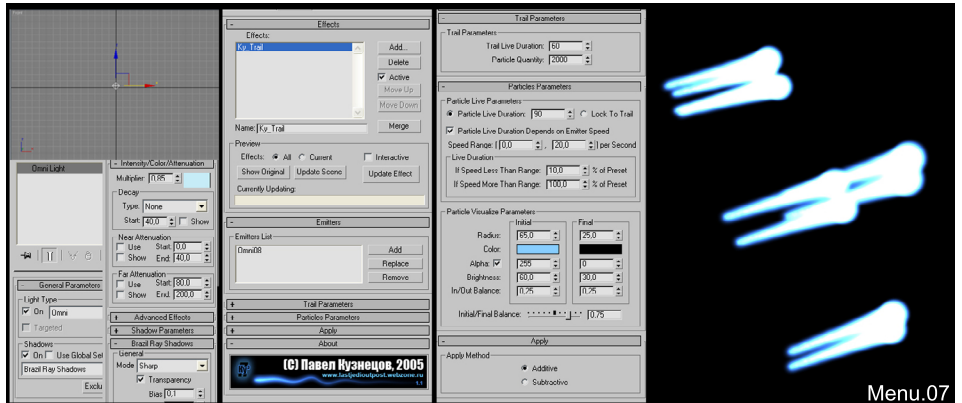
Menu.07

Fig.20

Fig.21

Fig.22

Fig.23

– Channel Mixer and Photo filter, to achieve the final results shown in **Fig.22**. To check the accuracy, I superimposed the image of the original markings onto the final image (**Fig.23**),

and for greater emphasis I added two black stripes to the top and bottom of the picture, but this simply a matter of personal tastes (**Fig.24**).

Thank you for your attention and patience. I
wish you all good work and great inspiration for
the future!

HENRY LEE (PASHKOV)

For more information about this artist please
visit:

http://strannik.cgsociety.org/gallery/

Or contact them at:

gglee@mail.ru

For professionals by professionals

Mainworks

Mainworks is a highly specialized cgi, artwork and postproduction service provider for industry, photographers and agencies. The optimal interaction between CGI and photography demands an extremely high surface quality and details of the 3D models. The modelling software we use has to be reliable and easy to use. PowerNurbs gives us all that and it integrates well into our cgi workflow. At Mainworks we are about cool pictures. Therefore only the best and most straightforward tools are good enough for us.

Mainworks only works with the best CG modeling tools. Power NURBS delivers.

Find out more about Mainworks at www.mainworks.de
To find out how nPowerSoftware can help your business visit us at www.npowersoftware.com

Photography backplate: Joris van Velzen (www.razum.com) cgi & postproduction: www.mainworks.de

"IN CHINA, THERE IS A PROVERB USED TO DESCRIBE THE BEAUTY OF A GIRL: ONE'S BEAUTY WOULD SHUT OUT THE MOON AND PUT THE FLOWERS TO SHAME, AND BE LOVELY ENOUGH TO MAKE THE FISH SINK AND GEESE SETTLE"

Making of by Wang Shiyong

Classical

Girl

In this "Making Of", Wang Shiyong shares how he created his beautiful image, "Classical Girl"

Classical Girl

CREATED IN:

Maya and Mental Ray

INTRODUCTION

In China, there is a proverb used to describe the beauty of a girl: "**One's beauty would shut out the moon and put the flowers to shame, and be lovely enough to make the fish sink and geese settle**".

I have always thought about composing a girl who is as poetic as the character developed for this image. One night, I dreamt of the very girl; she was beautiful, but I could only see just one single side of her face. Once I saw her from the front, she suddenly disappeared. After that time, I spent a lot of energy thinking about what kind of appearance the girl would have, and I have tried my very best to recreate the dream-girl's face in Maya.

Fig.01
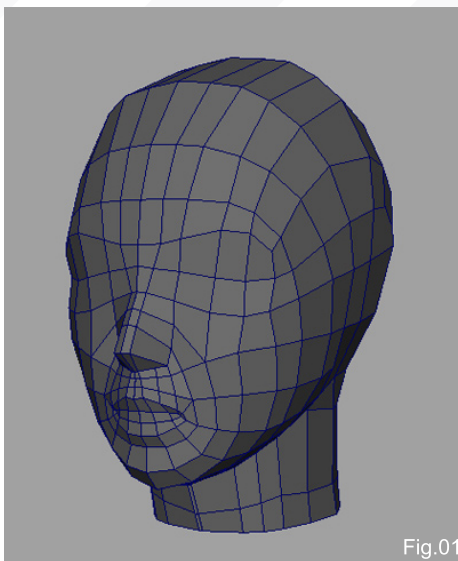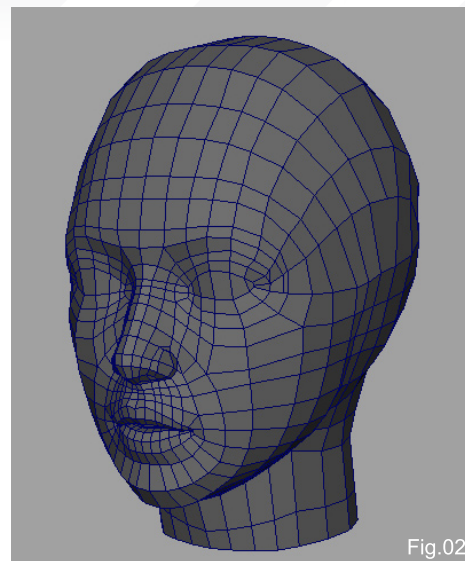
Fig.02

Fig.03

Fig.04

Fig.05

Fig.06
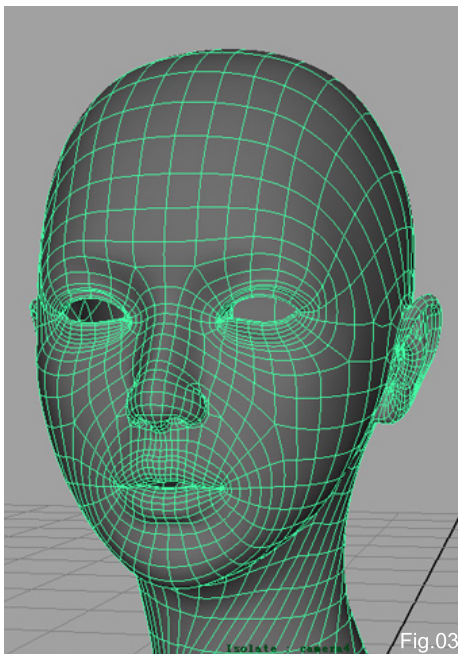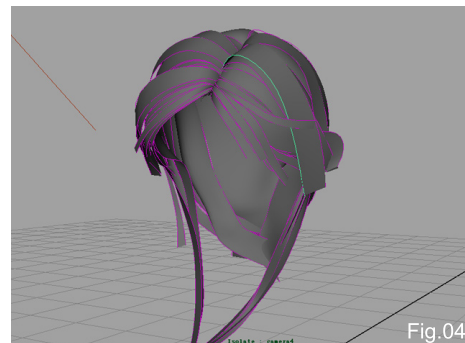
I spent a lot of time working on her facial features, modifying the model and making small changes. For example, I spent time checking whether the eyebrows were too prominent and whether the top and bottom of the cheekbones were obvious. I also made sure that the position of the eyelids was accurate, tried to ensure that the shape of the orbicularis oris muscle was believable, that the nose shape was defined and so on. I always give balance to these structures, ensuring that they fit together perfectly.

MODELLING

I didn't make a rough drawing to begin with, but painted directly on the computer using my raw feelings. I applied some observational painting methods in Maya to build up the model, just like when we see a painting from a distance. We can't appreciate the details of the painting but we can get an overall impression, and can be lured in for a closer inspection. The nearer we get, the more detail we see; meanwhile the picture becomes more and more wonderful. It was the same process when making the model. I do think that the good and bad aspects of the model should be visible from a distance, so at the very beginning I was just building up the rough appearance without going into too much detail (**Fig.01**). I initially wanted to model the head mainly through the feelings that it had

conjured in my heart. I didn't want to lose the freshness of those feelings in the proceeding stages. I then moved onto the facial features (**Fig.02**), and final modifications to the face (**Fig.03**).

HAIR

The hair has made using NURBS, as I find it's much easier to control it this way. I didn't delete the history record in order to preserve the Loft. I just needed to adjust the curve and then the hairstyle could be changed – also saving on time. To add volume, I made lots of layers to show the different levels of the hair (**Fig.04**).

EYES

The eyelashes were made using a NURBS column, because I felt it would be a much better method. Of course, it also caused some trouble when adjusting the curvature and the position of the eyelashes as it wasted a little bit of time. The eyeballs themselves were made by dividing them into two parts (**Fig.05**).

POST-PRODUCTION

I had added an ancient fan into the composition, but it didn't make the image look more beautiful (**Fig.06**), so I removed it and found some references of ancient and modern decorations for some earrings instead.

Fig.07

Fig.08
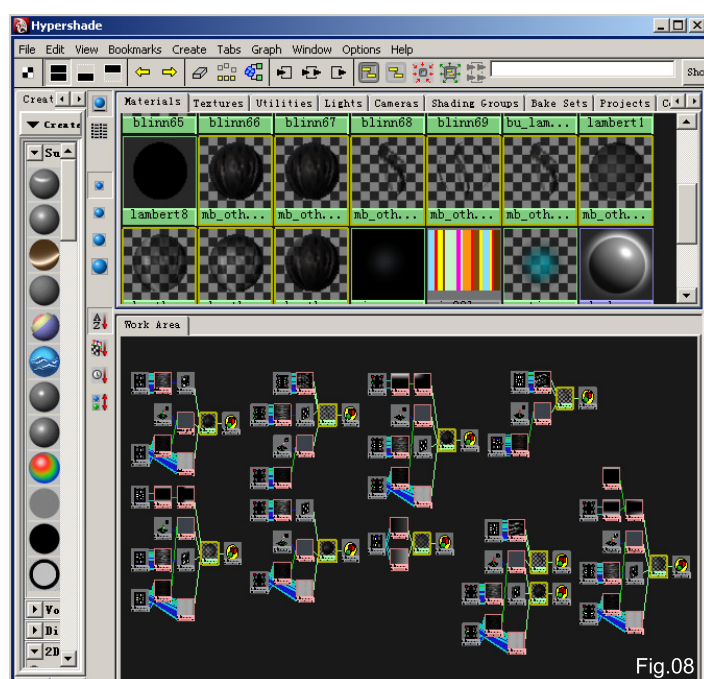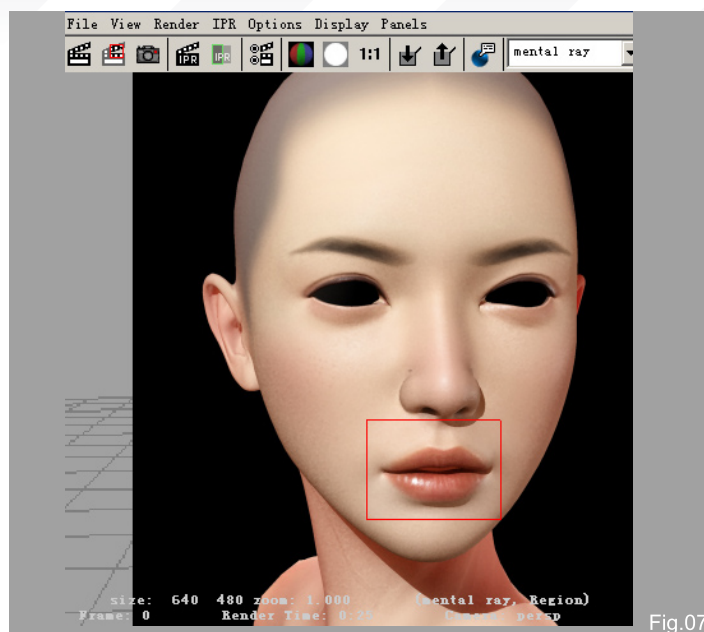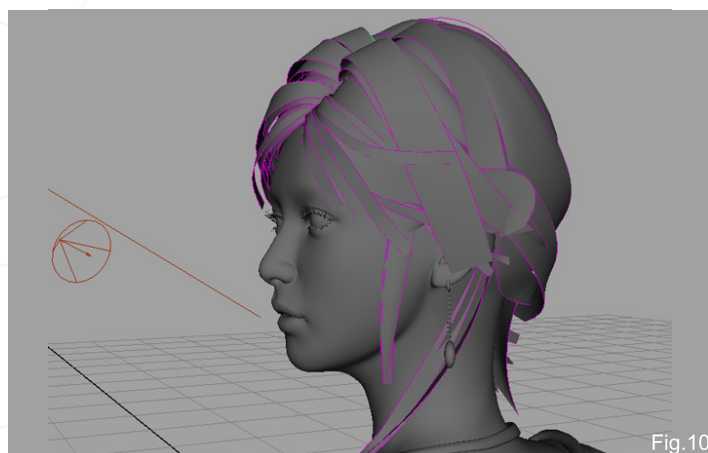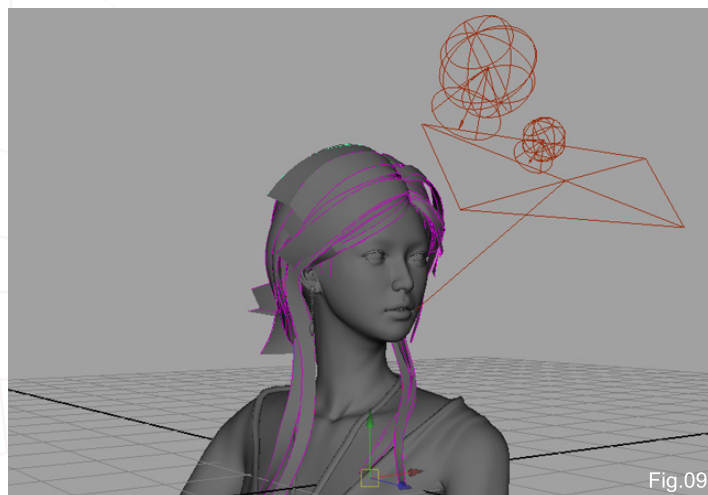
The face was made using pictures, but not superimposed photos. This was not because the photos wouldn't work well, but because I wanted to see the effects of handpainted skin (**Fig.07**).

After making it through the production of the image, many people asked me how the hair was made. In actual fact, I had tried to make the hair with hair plug-ins at the very beginning, but my machine didn't work so fast and wasted so much time doing the tests. I wasn't satisfied with the impression, so I tried to make the hair using polys and adding some pictures, but once again, I wasn't satisfied by the limitations and it would have become troublesome when I wanted to make adjustments. So in the end I decided to do it using NURBS. In reality, the pictures which I used are very common. I used just one coloured hair picture, but three

Fig.09

Fig.10

transparent pictures were painted, and I also added some process pictures in Maya so I could divide the hair up into many types. The levels of the hair can only be embodied perfectly if you set up the location (**Fig.08**).

Lighting

I used about five lights, one of which was designed for the eyes only; the sparkling effect that eyes can give can be seen even if the other objects in the scene cannot receive the same light. I spent some time adjusting the lights and I came up with a three-light effect to compare the results (Fig.09 & Fig.10).

Texturing & Rendering

The material of the face was 3S of Mental Ray. It has the transmission effect which made the skin seem more real. For the hair, I used the Blinn material spheres. The eyes used a Blinn and a Phong material which is the most popular method.

The renderer was Mental Ray, and I added some Final Gather effects. When finishing this step, I tried to use Render Man, but it turned out that while I could apply the effects in Mental Ray, I couldn't in Render Man.

Conclusion

Well, this has briefly covered the working process behind "Classical Girl". I have explained my process in the hope of bringing you some surprises, so I hope you have enjoyed the article, as I am very pleased to be able to share it with you.

Wang Shiyong

For more from this artist visit:

http://www.wangshiyong.com

Or contact:

wangshiyong.com@gmail.com

DIGITAL ART MASTERS

VOLUME 3

With the release of 3DTotal's book, *Digital Art Masters: Volume 3,* we have some exclusive chapters for you...

This book is more than just an artwork book. Not only does it feature full-colour, full-page images, but each artist has given a detailed description, in their own words, of the creation process behind each piece of published artwork. And they've done it especially for this book!

This month we feature:

"Future Station"
by Neil Maccormack
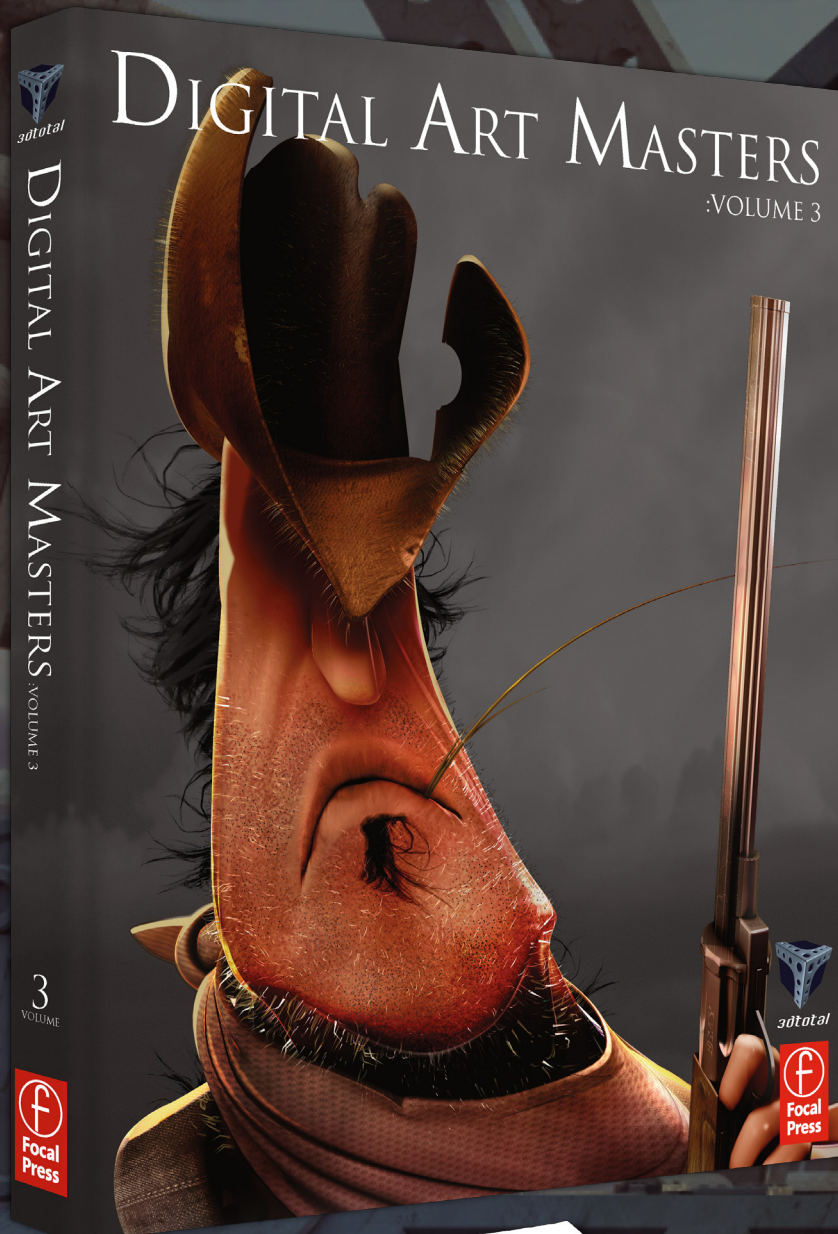
FUTURE STATION

BY NEIL MACCORMACK

CONCEPT

For a while now I have been thinking about creating an image of a futuristic environment on a large scale. I knew I wanted to base the image on either a city, station or terminal; a place where people would interact with industry or buildings. I knew I wanted to have a traveling theme with futuristic ships and designs incorporated in the image. So, with this in mind, I made some

basic sketches and downloaded some reference material of designs and environments that would give me a starting block (**Fig.01**).

MODELING

I started the modeling of the main landing platforms based on the research I had already done, and with a clear picture in my mind of what I wanted them to look like. I wanted to have a mesh that was

not too complicated and that I didn't have to spend too much time on, because I wanted to portray the mood and feeling in the picture rather than get bogged down modeling a very technical object.

I used primitive shapes in LightWave's Modeler to begin with, and then defined them more and more to display paneling and industrial details, such as the radars, fans, vents and so on (**Fig.02**).

The ships were also modeled using the same method. This time I used a design I had previously sketched

Fig.01

222   SCI-FI   SCI-FI   223

out for a different project but never used. I didn't mind reusing the design as the ships were not the focal point of this image. If the ships were not there, you would still be able to see the story behind the image. I wanted them to have large viewing bays on each side, and I beveled the windows in (**Fig.03**).

TEXTURING

The texturing was very simple. The ships really only have base colors applied, because I knew that the lighting in the final scene and their position would mask a lot of the texturing. For the station platforms it was slightly more complicated: I used some base metal texture maps for the platforms, which were applied in a planar format rather than UV as I knew the camera would only ever be stationary and not animated.

Fig.04 shows the model with the textures applied. As you can see, there is some stretching, but again in the final render this wouldn't matter and I wanted to focus on lighting more than anything else.
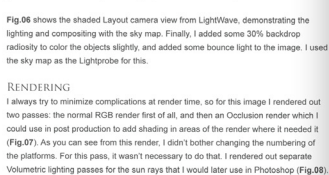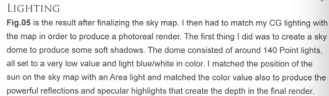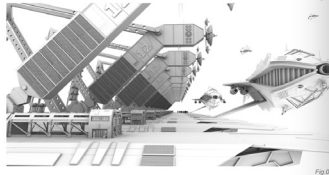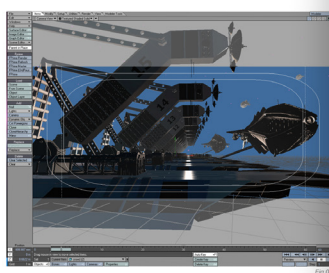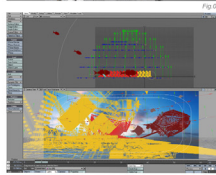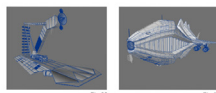
LIGHTING

Fig.05 is the result after finalizing the sky map. I then had to match my CG lighting with the map in order to produce a photoreal render. The first thing I did was to create a sky dome to produce some soft shadows. The dome consisted of around 140 Point lights, all set to a very low value and light blue/white in color. I matched the position of the sun on the sky map with an Area light and matched the color value also to produce the powerful reflections and specular highlights that create the depth in the final render.

Fig.06 shows the shaded Layout camera view from LightWave, demonstrating the lighting and compositing with the sky map. Finally, I added some 30% backdrop radiosity to color the objects slightly, and added some bounce light to the image. I used the sky map as the Lightprobe for this.

RENDERING

I always try to minimize complications at render time, so for this image I rendered out two passes: the normal RGB render first of all, and then an Occlusion render which I could use in post production to add shading in areas of the render where it needed it (**Fig.07**). As you can see from this render, I didn't bother changing the numbering of the platforms. For this pass, it wasn't necessary to do that. I rendered out separate Volumetric lighting passes for the sun rays that I would later use in Photoshop (**Fig.08**).

POST PRODUCTION

As this was never intended to be an animation, it gave me slightly more freedom to use Photoshop to composite the render passes together. I started out with the RGB render and Occlusion pass to form my base layers. I then added a metal texture over the image set to Multiply to warm the colors slightly and to give an extra layer of texture. **Fig.09** shows the layer set in "normal" mode.

I then added the Volumetric lighting and painted in some very simple people in the distance using a Photoshop brush to give the final render. **Fig.10** shows the final render and the various Photoshop layers.

CONCLUSION

What I did notice in the final render, after the post production was complete, was the repetition of textures on the station platforms. This was due to the cloning of the platforms in the 3D layout. In retrospect, another day or two spent texturing them at an earlier stage would have prevented the repetition in the final render! On the whole, however, I was very satisfied with the image; it really portrays the mood and feel of the environment that I was trying to establish.
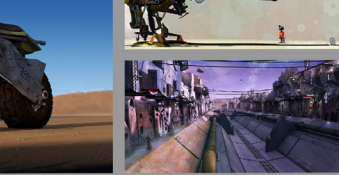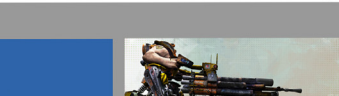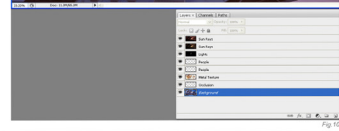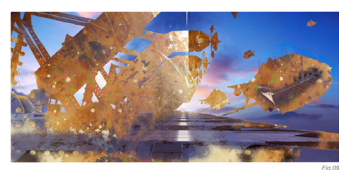

Fig.06

Fig.02

Fig.03

Fig.07

Fig.04

Fig.05

Fig.08

Fig.09

Fig.10

ARTIST PORTFOLIO

ALL IMAGES © NEIL MACCORMACK, BEARFOOTFILMS.COM

224   SCI-FI   SCI-FI   225

3dtotal.com

Is a resource website for the CG community; amongst our growing number of products for CG artists, we produce two monthly downloadable PDF magazines – *2DArtist* and *3DCreative*. We are based in the West Midlands, in the UK, and our intention with our magazines is to make each issue as full of great articles, images, interviews and tutorials as possible. If you would like more information on 3DTotal or our magazines, or if you have a question for one our team, please use the links below.

Contact Information

http://www.3dtotal.com
http://www.3dcreativemag.com
http://www.2dartistmag.com

Editor & Content Manager > Lynette Clee
lynette@3dtotal.com
Lead Designer > Chris Perrins
chrisp@3dtotal.com
Marketing > Jo Hargreaves
jo@3dtotal.com

Partners

If you have a CG community website and would like to support *3DCreative* and/or *2DArtist* magazine by showing our banners, please contact Lynette Clee at the email address above